ANNUAL SUMMARY, 1901.

INTRODUCTION.

The present annual summary completes the discussion of the meteorology of India for the year 1901.

It should be noted that in the monthly reviews it is attempted to present the facts and data from two different points of view. Meteorological data in India are chiefly utilized for the following purposes:—

1st.—In the discussion of the prevalence and spread of diseases, more especially of cholera and other diseases of an epidemic character.

2nd.—In connection with agricultural questions, more especially the progress and character of the crops as determined by the weather conditions of the period.

India has hence been divided into two groups of divisions from what may be termed the medical and agricultural stand-points. For the comparison of medical and meteorological statistics, India is arranged into the following provinces, which are believed to be fairly homogeneous so far as the conditions of the prevalence of the more common diseases are concerned:—

(1) Burma Coast and Bay Islands.
(2) Burma Inland.
(3) Assam.
(4) Bengal and Orissa.
(5) Gangetic Plain and Chota Nagpur.
(6) Upper Sub-Himalayas, including the sub-montane districts of the United Provinces and the Punjab and the meteorological divisions of the South-East, South, Central and North Punjab.
(7) North-West Frontier, Indus Valley and North-West Rajputana.
(8) East Rajputana, Central India and Gujarat.
(9) Deccan.
(10) West Coast.
(11) South India.

The data for each of these divisions are given in Table I in large figures, and the portion of each monthly review, entitled, "Summary of the chief features of the weather in India during the month," is intended to give a sketch of the broader and more important features of the weather in India for the use of those who study the relations between the prevalence and spread of diseases and the weather conditions prevailing at the time in India.

According to the second method of arrangement, India is divided into 57 meteorological districts or divisions from the agricultural stand-point, each of which is fairly homogeneous so far as the distribution of rainfall and the general character of the crops and the conditions of their growth are concerned. The following gives the two series of divisions arranged under the respective political areas or provinces to which they belong:—

Political Division or Province.	Meteorological Division or District.	Meteorological Province.
BURMA	Tenasserim and Bay Islands.	Burma Coast and Bay Islands.
	Lower Burma	
	Arakan	
	Central Burma	Burma Inland.
	Upper Burma	
ASSAM	Assam (Surma)	Assam.
	„ (Brahmaputra)	
BENGAL	East Bengal	Bengal and Orissa.
	Deltaic Bengal	
	Central Bengal	
	North Bengal	
	Orissa	
	Chota Nagpur	Gangetic Plain and Chota Nagpur.
	South Bihar	
	North Bihar	
UNITED PROVINCES OF AGRA AND OUDH.	United Provinces, East	
	United Provinces, Central	
	South Oudh	
	North Oudh	
	United Provinces, East Sub-montane.	
	United Provinces, West Sub-montane.	Upper Sub-Himalayas.
PUNJAB AND NORTH-WEST FRONTIER PROVINCE.	South-East Punjab	
	South Punjab	
	Central Punjab	
	Punjab Sub-montane	
	North Punjab	
	West Punjab	North-Western Frontier, Indus Valley and North-West Rajputana.
BOMBAY NORTH	Sind	
RAJPUTANA AND CENTRAL INDIA.	West Rajputana	
	Central India, East	East Rajputana, Central India and Gujarat.
	Rajputana, East, Central India, West.	
BOMBAY NORTH	Kathiawar and Cutch	
	Gujarat	
UNITED PROVINCES	United Provinces, West.	

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Political Division or Province.	Meteorological Division or District.	Meteorological Province.
Bombay	Bombay Deccan	Deccan.
	Khandesh	
Berar	Berar	
Central Provinces.	Central Provinces. West	
	„ „ Central	
	„ „ East	
Hyderabad or the Nizam's Dominions.	Hyderabad, North	
	„ South	
Bombay	Konkan	West Coast.
	Malabar	
Madras	Madras, South	South India.
	„ „ Central	
	„ East Coast, South	
	„ Central	
	„ East Coast, Central	
	„ East Coast, North	
Coorg and Mysore	Coorg	
	Mysore	
Hill Districts	Assam Hills	Hills.
	Bengal Hills	
	United Provinces Hills.	
	Punjab and North-West Frontier Province Hills.	
	Baluchistan Hills	

The double grouping is shown in Plate I at the end of this summary.

The data of Table I in the monthly reviews and in the present annual part are obtained, with a few exceptions, from the observations telegraphed daily to Simla for publication in the Daily Weather Report. In the case of thermometric observations, they are telegraphed to the nearest half degree. Hence the maxima and minima temperature data of the second class observatories derived from these telegraphic reports and given in that table occasionally differ to some slight extent from the means of the more exact data (recorded to tenths of a degree) tabulated in the observation forms sent to the Calcutta Office, and which are used in the calculation of the mean temperature data in Table II. There is also another reason why the mean maxima and minima data in Tables I and II differ to a slight extent. In Table I the daily or 24 hours' period is assumed to end at 8 A.M., and in Table II at 4 P.M., and hence the maximum temperature in Table I for any month of thirty-one days at any station gives the mean for thirty-one periods of 24 hours ending at 8 A.M. of the 31st, and in Table II for the same number of 24 hours' periods ending at 4 P.M. on the 31st, and hence virtually of a monthly period one day in advance of the former. Similarly for months of 28, 29 or 30 days. These remarks will explain some of the slight discrepancies which may be found between the maxima and minima temperature mean data in Tables I and II, and hence also in the monthly mean variation data given in these tables in the monthly reviews and annual summary.

The methods of exposure of the instruments at observatories in India, and of the reduction of the observations and the calculation of mean data, have been fully stated and explained in the Annual Reports on the Meteorology of India, and need not be repeated. The reader is referred more especially to the Annual Report of the year 1885 and to the "Instructions to observers of the Indian Meteorological Department" for full information on this subject.

Solar Radiation.

It was stated in the Annual Report of 1889 that the observations of solar thermometers are liable to large and irregular changes which make them unfit for accurate observation, except perhaps at the first class observatories in India. The instruments were hence withdrawn from use, except at the following stations :—

Srinagar.	Simla.	Allahabad.
Calcutta (Alipore).	Lahore.	Bombay.
Leh.	Jodhpur.	Aden.

Observations of the solar thermometers were made during the year 1901 at these nine stations. The monthly averages of past years and their variations from the data of 1901 are given in Tables I and II and the mean variation data for the past eleven years in Table III.

TABLE I.—*Average excess of maximum insolation over the corresponding maximum shade temperature.*

Station.	Number of years observations used.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
		°	°	°	°	°	°	°	°	°	°	°	°	°
Simla . . .	14—17	61·7	64·9	67·5	67·9	68·0	62·6	51·0	49·8	61·1	67·7	64·8	62·4	62·5
Lahore . . .	25—26	49·9	57·7	60·5	60·6	56·5	53·8	56·2	59·2	57·2	55·7	54·3	51·9	56·1
Jodhpur . . .	4—5	53·1	55·2	56·6	56·7	54·6	53·5	56·9	58·3	56·3	52·9	51·4	50·2	54·6
Allahabad . .	26	57·1	58·9	59·0	57·3	56·9	57·5	57·9	59·2	58·4	56·1	55·7	57·2	57·6
Calcutta (Alipore) .	24—25	52·2	53·8	54·3	54·8	55·8	53·3	54·9	55·2	55·9	55·5	52·8	51·9	54·2
Bombay . . .	25—26	53·5	54·9	53·9	54·3	53·9	48·6	44·6	45·8	52·8	53·6	53·2	52·8	52·1
Leh . . .	18	63·2	70·3	68·9	68·6	66·0	62·6	60·3	61·1	61·5	62·9	61·1	60·0	63·9
Aden . . .	16—19	52·1	52·8	52·1	48·6	46·2	42·6	43·1	45·1	49·8	52·0	50·5	50·8	48·8

TABLE II.—*Comparison of excess of sun over shade temperatures in 1901 with the averages of Table I.*

Station.	Number of years instrument, the observations of which are utilized for this comparison, has been in use.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
		°	°	°	°	°	°	°	°	°	°	°	°	°
Simla . .	1	−0·5	−1·9	− 2·7	−3·7	−5·8	−4·2	−9·2	−18·0	+ 4·0	−1·2	− 0·3	− 1·1	−3·7
Lahore . .	16	−2·1	−3·7	− 7·9	−5·8	−4·4	−5·1	−9·1	−6·6	− 7·0	−7·0	− 7·6	− 6·3	−6·1
Jodhpur . .	4	+1·1	+0·2	− 1·0	−0·1	−0·4	−0·7	−1·9	−1·1	− 1·9	−1·0	+ 0·3	+ 0·4	−0·5
Allahabad . .	12	−0·2	−4·9	− 1·3	+0·7	−0·8	−2·2	−1·0	+0·8	− 0·8	−0·3	− 0·1	− 1·2	−0·9
Calcutta (Alipore)	8½	−4·4	−4·5	− 3·5	−5·3	−5·1	− 4·7	−1·1	−2·7	− 6·7	−3·7	− 8·4	− 3·5	−4·5
Bombay . .	16	−3·5	−1·6	− 1·8	−3·5	−3·5	− 4·7	−5·0	−6·6	− 3·7	−5·9	− 2·3	− 4·0	−3·8
Leh . . .	10	+5·3	+2·5	+ 0·1	+1·3	+0·6	+ 2·7	+1·4	+ 0·7	+ 4·7	−0·8	+ 1·0	+ 0·2	+1·6
Aden . .	11	−2·4	−3·2	− 4·5	−1·1	−1·6	− 3·3	+1·8	+ 2·2	+ 4·9	+4·6	+ 3·9	+ 2·0	+0·3

TABLE III.—*Comparison of the annual mean excess of sun over shade temperature for each year of the period 1890-1900 with the averages of past years.*

Station.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.
	°	°	°	°	°	°	°	°	°	°	°
Simla	?	−0·4	−2·9	−1·3	−2·9	?	+2·6	+1·3	+3·5	?	+1·7
Lahore	+2·5	+1·8	+0·9	+0·4	−0·4	−0·6	−0·7	−0·5	−1·0	−2·3	−7·3
Jodhpur . . .	?	?	?	?	?	?	?	+1·7	+0·5	−0·9	−0·9
Allahahad . . .	+0·8	+0·7	−0·6	−0·3	+0·1	−0·5	+0·4	+0·9	−0·6	−0·9	−1·0
Calcutta (Alipore) . .	+0·8	?	?	+1·2	+1·2	+1·5	−0·2	−1·9	−0·1	−2·4	−7·0
Bombay . . .	+1·0	−0·5	0	+0·5	−0·1	+0·2	+0·5	+0·6	−1·0	−1·6	−6·5
Leh	−6·7	−3·6	+4·3	+1·3	+2·2	+1·4	+0·7	+1·3	−1·5	+0·7	+3·6
Aden	?	+5·2	+4·0	+1·3	+0·5	+1·0	−2·1	−4·4	−4·2	−0·9	−4·3

Nocturnal Radiation.

It was stated in the Annual Report of 1890 that the observations of the terrestrial radiation thermometers in India are nearly as unsatisfactory as those of the solar radiation thermometers. Observations were only recorded of these instruments during the year 1901 at the following stations:—

Srinagar.	Jodhpur.	Bombay.
Simla.	Allahabad.	Leh.
Lahore.	Calcutta (Alipore).	Aden.

The following table, TABLE IV, gives the average data of past years for the above stations; TABLE V, the variations from the normal, and TABLE VI, the mean annual variation data for the past eleven years.

TABLE IV.—*Average depression of monthly mean nocturnal radiation temperatures below mean minimum shade temperatures.*

STATION.	Number of years observations used.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	YEAR.
		°	°	°	°	°	°	°	°	°	°	°	°	°
Srinagar . . .	3—7	7·3	8·4	9·7	7·9	8·3	6·5	6·7	4·9	12·5	10·8	11·4	12·0	8·9
Simla . . .	10—13	6·9	6·4	7·4	7·7	6·9	5·6	3·3	3·0	4·8	8·2	9·0	7·7	6·4
Lahore . . .	24—25	9·2	9·0	8·6	9·0	8·6	5·9	3·8	4·0	6·2	9·4	10·2	9·4	7·8
Jodhpur . . .	4—6	11·0	9·6	10·4	8·7	5·1	3·0	2·0	2·1	4·8	10·4	10·7	10·5	7·4
Allahabad . .	24—25	10·7	11·3	12·6	12·1	8·9	4·9	3·2	2·6	4·0	8·9	12·1	11·9	8·6
Calcutta (Alipore) .	24—25	8·3	7·7	6·4	4·8	3·2	2·1	1·8	1·9	2·6	4·8	7·2	8·8	5·0
Bombay . . .	26	10·2	9·5	8·4	6·7	4·8	2·8	2·2	2·4	3·1	6·6	9·9	10·9	6·5
Leh . . .	17—19	10·4	8·7	10·7	11·4	11·0	11·5	10·1	10·9	12·3	14·7	15·2	12·4	11·6
Aden . . .	17—20	2·8	2·1	2·6	3·1	3·1	3·3	2·0	2·0	3·2	3·8	3·9	3·2	2·9

TABLE V.—*Comparison of mean monthly depression of nocturnal radiation temperatures in 1901 with the averages of Table IV.*

STATION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	YEAR.
	°	°	°	°	°	°	°	°	°	°	°	°	°
Srinagar	?	?	?	?	?	?	?	?	—1·2	+0·2	—1·0	—2·7	?
Simla	—5·1	—4·3	—4·3	—3·2	—2·1	—0·1	+1·3	—1·1	—2·1	—3·6	—3·0	—3·4	—2·6
Lahore	+0·2	+0·9	+1·1	+1·7	+2·3	+3·6	+2·2	+0·9	+2·1	+2·2	+3·0	+3·6	+2·0
Jodhpur	—3·2	—1·2	+0·1	+2·4	+0·7	—1·5	—0·2	+0·7	+1·1	—1·7	0	+1·1	—0·1
Allahabad	—3·5	—2·8	—0·6	+1·5	+1·9	+2·9	—0·6	—0·2	+1·9	+1·3	+1·8	+2·2	+0·5
Calcutta (Alipore) . .	—4·1	—3·8	—1·9	—1·5	—0·6	—0·3	—0·2	—0·2	—0·4	—1·6	—3·1	—2·3	—1·7
Bombay	—2·3	—1·2	—1·5	—1·1	—1·2	—0·9	—0·5	—1·0	+0·1	—1·1	—0·7	—1·4	—1·1
Leh	—1·9	—1·0	+1·6	+2·0	+3·3	+2·6	+0·1	+0·7	+0·1	+1·3	+0·2	—0·3	+0·7
Aden	+0·1	+0·1	+0·8	+0·5	+0·2	?	—0·1	—0·1	+0·1	0	+0·1	+0·2	?

TABLE VI.—*Comparison of the mean annual depression of nocturnal radiation temperatures with the averages of past years.*

STATION.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.
	°	°	°	°	°	°	°	°	°	°	°
Simla	+2·3	+2·2	+3·1	+1·8	+1·6	?	—3·3	—1·6	—3·3	—2·7	—2·4
Lahore	—1·2	—1·7	—0·9	—0·7	+0·7	+1·0	—0·3	—0·2	+1·0	+2·0	+2·2
Jodhpur . . .	?	?	?	?	?	?	?	+0·1	0	—0·1	—0·5
Allahabad . . .	—0·9	—0·6	0	—1·3	—1·2	+0·2	+1·0	+0·1	+1·2	+1·6	—0·9
Calcutta (Alipore) . .	—0·3	+0·1	—0·1	—0·5	—0·1	+0·1	+0·4	+0·2	+0·2	—0·2	—2·2
Bombay . . .	+1·4	+2·5	+0·8	—1·0	—1·8	—1·2	+0·8	—0·3	—1·0	—0·6	—0·7
Leh	+3·1	+3·4	+2·9	+0·4	—2·3	—2·8	—2·0	—2·4	—0·1	—0·4	—2·1
Aden	—0·4	—0·5	+0·1	+1·2	+1·1	—0·4	—0·8	—0·4	—0·3	—0·1	+1·9

Temperature of the ground.

Observations of the temperature of the ground were recorded during the year 1901 at five stations—Calcutta, Allahabad, Dehra, Lahore and Jaipur.

The following table, Table VII, gives the average data of past years for the above stations, and Table VIII, the variations from the normal for each month during 1901.

The thermometers used for the purpose are verified standard mercurial thermometers with attached scales of porcelain, the scale being engraved also on the tube. At Allahabad, with the exception of the thermometer at nine feet, they are read three times daily at equal intervals of eight hours; at Lahore, with the exception of the thermometer at six feet, and Jaipur, with the exception of the thermometers at 10, 20 and 45·6 feet, they are read four times daily at intervals of six hours, and at Dehra once daily, *viz.*, at 3 P.M., and at Calcutta (Alipore) at 1-45 P.M.

The thermometers below the surface have their bulbs protected with pointed copper shoes which rest on the ground at the bottom of a wooden tube, inserted to the specified depth and projecting six inches above the surface, the upper ends being closed by a cap of metal or wood. Those at depths of three and six feet are attached to the lower end of a stout wooden bar of about half the diameter of the tube. Those at one foot have a brass ring attached to the top of the wooden frame by which they are lifted; and in all these the lower part of the frame around the bulb has been cut away, and the lower end fitted with the copper shoe above mentioned.

TABLE VII.—*Average monthly mean temperatures of the ground and of the air.*

		Number of years observations used.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	YEAR.
			°	°	°	°	°	°	°	°	°	°	°	°	°
LAHORE.	Air	28—30	52·0	56·7	67·8	79·6	87·4	91·2	88·3	86·6	83·9	74·9	62·4	53·2	73·6
	Surface	16—17	50·6	57·4	74·5	90·3	101·3	104·7	101·1	99·1	95·7	78·8	61·2	51·5	80·5
	1 foot deep	16—17	57·4	60·3	70·4	81·5	89·8	94·4	94·8	93·9	92·3	82·8	71·0	61·3	79 2
	3 feet „	16—17	62·9	63·2	69·9	78·9	86·5	91·5	92·8	92·5	91·9	85·6	76·2	67·7	80·0
	6 „ „	16—17	71·4	69·2	70·6	74·9	80·2	84·8	87·5	88·4	88·9	87·0	82·2	76·3	80·1
JAIPUR.	Air	27—28	58·8	63·3	74·6	85·1	90·6	90·6	83·9	81·4	81·9	76·2	67·7	60·0	76·2
	Surface	20—21	63·1	70·0	83·6	95·1	101·7	100·5	92·0	89·6	91·8	85·6	72·6	63·9	84·1
	4 inches deep	15—16	61·1	68·0	79·6	90·6	97·0	95·7	88·1	85·7	88·0	84·5	72·0	62·0	81·0
	1 foot deep	20—21	61·5	66·7	77·5	87·6	94·4	95·5	89·0	86·6	87·6	83·4	72·9	63·6	80·5
	3 feet „	20—21	66·7	67·9	74·4	81·9	87·7	91·2	88·7	86·5	87·0	85·1	78·2	70·9	80·5
	10 „ „	19—21	74·3	72·8	74·0	77·7	81·8	85·3	86·2	86·0	85·7	85·2	82·5	78·2	80·8
	20 „ „	20	80·4	79·0	78·5	78·2	78·8	80·1	81·3	82·3	82·9	83·4	83·3	82·6	80·9
	45·6 „ „	14—15	81·7	81·8	81·9	81·9	81·9	81·8	81·8	81·7	81·7	81·6	81·7	81·7	81·8
DEHRA.	Air	30—31	54·8	57·4	66·9	77·1	82·6	84·0	79·4	78·0	76·9	70·6	62·4	56·1	70·5
	1·1 feet deep	20—21	57·3	58·8	67·7	78·7	86·4	88·3	84·4	82·4	81·5	76·5	67·7	60·4	74·2
	3·2 „ „	20—21	62·0	61·2	66·8	75·7	82·4	85·0	83·6	82·2	81·7	78·4	72·1	65·9	74·8
	6·4 „ „	19—21	67·6	64·7	67·1	71·6	76·9	80·4	81·5	81·6	81·2	80·3	76·1	71·6	75·1
	12·8 „ „	19—21	73·9	71·9	70·9	71·4	73·2	75·3	77·4	79·2	79·8	79·5	78·3	76·2	75·6
	25·6 „ „	18—20	76·4	75·7	75·0	74·3	74·1	74·1	74·5	75·9	76·9	77·1	77·1	76·8	75·7
ALLAHABAD.	Air	29—31	60·6	65·3	77·8	87·7	92·4	90·6	84·7	83·2	83·2	78·6	69·0	60·7	77·8
	Surface	21—22	59·5	65·5	80·8	92·6	102·0	99·1	88·8	87·0	87·6	81·2	67·9	59·1	80·9
	1 foot deep	21—22	61·1	65·5	75·8	86·2	94·2	94·7	87·8	85·9	85·9	81·0	71·0	62·9	79·3
	3 feet „	21—22	66·6	68·1	74·0	82·4	89·2	92·1	88·2	86·2	86·0	83·4	76·8	70·0	80·3
	9 „ „	14	78·6	77·0	76·8	78·2	81·0	83·5	84·7	84·6	84·6	84·5	83·4	81·3	81·5
CALCUTTA (ALIPORE).	Air	16	76·9	81·6	90·4	95·4	93·5	91·3	88·0	87·1	87·4	86·6	81·2	76·1	86·3
	Surface	22	76·1	85·0	102·4	112·1	107·3	97·9	94·0	93·2	94·1	93·1	85·7	76·8	93·1
	1 foot deep	21—22	67·4	71·1	78·8	86·1	88·2	87·1	85·9	85·5	85·3	83·3	76·4	68·9	80·3
	3 feet „	21—22	72·0	73·8	78·8	84·7	87·5	87·4	86·4	86·2	86·0	85·1	80·8	74·9	82·0
	6 „ „	16—18	77·1	76·3	77·7	81·0	83·9	85·3	85·2	85·2	85·2	85·1	83·6	80·4	82·2

The mean results for Calcutta in Table VII (above) show that the surface of the ground is, on the average of the whole year, 6°·8 hotter than the air at about 2 P.M. They also indicate that the temperature increases 1°·9 in passing from one foot to a depth of six feet.

At Allahabad the ground surface is on the average 3°·1 hotter than the air. The average temperature decreases 1°·6 down to a depth of one foot, and then increases 1°·0 to a depth of three feet, and thence 1°·2 to a depth of 9 feet.

At Jaipur (where the soil on which the instrument is placed is almost pure sand) the surface is as much as 7°·9 hotter than the air on the average of the whole year. In May the difference reaches the large amount of 11°·1. The mean temperature decreases to a depth of one foot, is constant between 1 and 3 feet, and then slowly increases to a depth of 45·6 feet.

At Lahore the surface soil, which is similar in character to that of Jaipur, is on the average 6°·9 hotter than the air. The temperature decreases through a depth of one foot, and thence increases slowly to a depth of six feet.

TABLE VIII.—*Comparison of the mean monthly temperatures of the ground in 1901, with the averages of Table VII.*

		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
		°	°	°	°	°	°	°	°	°	°	°	°	°
Lahore.	Air	+0·5	+0·1	+2·8	−0·8	+0·8	+2·9	+0·7	+2·7	+2·1	+5·0	+3·2	+3·2	+1·9
	Surface	−1·1	−1·5	+1·2	−2·9	−1·5	+1·2	−2·0	+3·0	−1·0	+2·1	−2·7	−3·1	−0·7
	1 foot deep	−0·7	+0·2	+0·8	−0·8	−0·8	+0·7	−0·8	+1·8	+1·0	+2·5	+1·4	+0·5	+0·5
	3 feet „	−0·6	+0·4	+0·4	−0·4	−0·9	+0·2	−0·2	+1·0	+1·1	+1·5	+1·6	+0·8	+0·4
	6 „ „	−0·5	−0·2	−0·2	−0·1	−0·8	−0·6	−0·1	−0·2	+0·5	+0·6	+1·0	+0·5	0
Jaipur.	Air	−2·4	−1·3	+1·6	0	+2·1	+5·2	+4·1	+0·9	+2·2	+5·5	+2·8	+3·5	+2·0
	Surface	−2·9	−2·8	+1·1	−1·2	+0·2	+5·2	+3·8	−0·4	+2·8	+2·8	+0·7	+0·5	+0·8
	4 inches deep	?	?	?	?	?	?	?	?	+4·0	+1·6	+1·2	+2·9	?
	1 foot deep	−3·4	−1·7	+0·7	+0·4	+1·4	+5·6	+4·8	+0·2	+3·7	+2·4	+1·4	+3·4	+1·6
	3 feet „	−2·9	−1·5	−0·2	+0·3	+0·4	+2·2	+3·7	+0·5	+3·2	+2·5	+1·5	+1·6	+0·9
	10 „ „	−6·9	−0·7	−0·3	−0·5	−0·9	−0·4	+1·5	+1·5	+0·7	−2·3	−1·5	−1·0	−0·9
	20 „ „	−0·2	+1·3	+1·2	+0·9	+0·6	+0·3	+0·3	+0·6	+1·5	+5·5	+5·8	+6·1	+2·0
	45·6 „ „	+0·9	+0·9	+0·8	+0·8	+0·7	+0·8	+0·6	+0·7	+0·6	+0·7	+0·7	+0·8	+0·8
Dehra.	Air	−2·9	−2·4	−1·3	−2·7	−1·9	+2·9	+0·8	−1·8	−1·9	+0·6	+0·2	−1·2	−1·0
	1·1 feet deep	−1·8	−0·6	−1·2	−0·8	+0·9	+4·9	+3·1	−0·7	−0·5	+0·7	+2·8	+1·0	+0·7
	3·2 „ „	−1·6	−0·2	−1·2	−0·4	+0·1	+2·5	+2·8	+0·1	−0·1	+0·6	+1·8	+1·6	+0·5
	6·4 „ „	−0·2	+0·8	−1·1	−1·1	−1·2	−0·1	+1·3	+0·3	−0·2	−0·3	+1·4	+1·7	+0·1
	12·8 „ „	0	−0·8	−1·0	−0·9	−0·4	+0·1	+0·7	+0·8	+0·7	+0·3	+0·6	+0·9	+0·1
	25·6 „ „	+0·4	−0·1	−0·8	−1·0	−0·8	−0·3	+0·2	+0·7	+1·4	+1·1	+0·6	+0·5	+0·2
Allahabad.	Air	−3·1	−1·3	−2·5	−0·7	+1·2	+7·2	+4·3	+0·5	−0·3	+1·5	+0·1	−0·4	+0·5
	Surface	−2·2	−0·6	+0·9	+0·3	+3·4	+11·2	+8·9	+4·1	+4·1	+4·2	+2·1	+0·8	+3·1
	1 foot deep	−2·0	−0·8	+0·1	+1·3	+1·5	+7·1	+5·4	+2·2	+0·2	+3·7	+2·2	+0·3	+1·8
	3 feet „	−0·6	−0·7	−0·9	+0·5	+0·7	+3·0	+4·8	+2·5	+0·3	+2·1	+2·0	+0·9	+1·2
	9 „ „	+0·2	−0·4	−0·5	−3·6	−0·2	+0·2	+1·2	+1·4	+0·9	+0·8	+0·9	+0·6	+0·1
Calcutta (Alipore).	Air	−1·5	+0·8	+0·7	+1·6	+1·0	+2·3	+0·8	+0·9	+0·7	+2·1	+0·5	+0·6	+0·9
	Surface	+0·1	−0·5	+0·6	−3·0	−4·4	+1·3	−2·0	−1·8	−2·0	−0·7	−0·3	−0·6	−1·1
	1 foot deep	+1·6	+1·8	+0·6	+0·8	−0·3	+0·5	−0·4	0	−0·6	+1·3	+1·8	+1·7	+0·7
	3 feet „	+1·6	+1·1	−0·1	+0·6	−0·4	−0·1	−0·6	−0·6	−1·1	+0·2	+1·2	+0·8	+0·2
	6 „ „	−0·3	+0·5	+0·2	+0·6	−0·2	−0·7	−0·8	−1·0	−1·2	−0·8	+0·2	−0·7	−0·4

Temperature.

The methods of exposing the thermometers at observatories in India and of deducing the daily and monthly means from the observed readings of the instruments are described in pages 18-19 of the Annual Report for 1890.

The variations of the mean temperature of each month from the normal given in Table II of the monthly reviews are deduced by a comparison of the actual monthly means with the normal monthly means obtained by the same methods, given in Table XII of average monthly temperatures of 87 stations in India and Ceylon, etc., in pages 19 to 22 of the Annual Report for the year 1890. Average data for 134 stations will also be found in pages 39 to 42 of the Annual Report for the year 1887.

Average or normal monthly temperatures of 82 second class stations, based on the whole of the data up to December 1896, were given in Table I of the Annual Summary for 1896.

The variations obtained by a comparison of these normal means with the actual monthly means in Table II of the monthly weather reviews for the year are given in Table IX.

The mean variations given in Table X of the Geographical Summary are derived from the variation data of Table II of the monthly weather reviews of the year 1901.

In Table I, published in each monthly review, the mean temperature of the day is calculated, as in the Daily Weather Reports, by the formula, daily mean $=\frac{\text{Maximum}+\text{Minimum}}{2}$. It differs from the true daily mean by small amounts varying slightly with the season. The variations of the daily or monthly actual means obtained by this method from normal daily or monthly means similarly calculated, usually differ very little from those obtained by the more laborious computation of true daily means and the comparison of these with normal true daily means. In Table I of the monthly weather reviews of the year 1901 the variations of the monthly mean maxima and minima temperatures from the normal, as well as the variations of the monthly mean temperatures, *i.e.*, $\frac{\text{Maximum}+\text{Minimum}}{2}$ are given.

Normal monthly mean maxima and minima temperatures of 94 stations, calculated from the observations of the eleven years' period, 1878—1888, were given in the Annual Summary for 1891. The additional data for the years 1889—1893 have been utilized to furnish what are probably slightly more accurate means than those given in the 1891 Annual Summary. The re-calculated means were given in the 1894 Annual Summary, Tables I and II, and need not be repeated here.

Tables X and XI (*a*), XI (*b*) and XI (*c*) give summaries of the temperature variation data for each month of the year 1901 and for the year. In the first table (Table X) the same division has been adopted as that employed in the Annual Reports from 1881 to 1890. This enables an exact comparison to be made of the temperature data of the year 1901 with those of previous years given in the Annual Reports. In the second set of tables [Table XI (*a*), XI (*b*) and XI (*c*)] the variation data are given for the eleven meteorological provinces into which the empire is divided for the purpose chiefly of comparing meteorological and health statistics, and in the last table (Table XII) the data are given for 55 of the 57 smaller divisions or areas into which India is sub-divided with a view to the comparison of meteorological and crop statistics—

TABLE IX.—*Comparison of monthly mean air temperature in 1901 with the averages of past years.*

Meteorological Province.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
		°	°	°	°	°	°	°	°	°	°	°	°	°
Burma Coast and Bay Islands.	Port Blair	+2·4	+2·8	+2·2	+2·7	−0·3	+0·4	+0·5	+0·8	+1·5	−0·2	+0·2	+0·5	+1·1
	Rangoon	+2·4	+2·3	+1·6	+1·3	−0·8	+0·8	+0·1	−0·4	+1·7	−0·5	+1·9	−1·2	+0·8
	Diamond Island.	+2·2	+2·2	+1·3	+0·9	+0·5	+2·2	+0·8	+0·5	+2·4	+0·4	+2·0	+0·4	+1·3
	Cocos Island	+3·9	+3·2	+1·6	+2·5	+0·9	+0·2	−0·6	+0·1	+2·7	+0·4	+1·0	+0·8	+1·4
	Akyab	−1·4	+0·7	−1·1	+0·8	+0·3	−0·5	−0·2	−0·7	+0·1	+0·5	+0·9	−1·5	−0·2
Bengal and Orissa.	Chittagong	+0·3	+2·2	+1·3	+0·8	+1·6	+0·4	+1·1	+1·0	+0·2	+0·8	+0·5	−0·1	+0·8
	Calcutta (Alipore).	−1·5	+0·8	+0·7	+1·6	+1·0	+2·3	+0·8	+0·9	+0·7	+2·1	+0·5	+0·6	+0·9
	Saugor Island	−2·1	−0·5	0	+0·1	+1·3	+2·0	+0·9	+1·3	+0·8	+1·5	−0·1	+0·1	+0·4
	False Point	−1·1	−1·1	−1·0	−0·3	+0·6	+1·8	+0·8	0	+0·9	+1·5	+0·5	+0·2	+0·2
Gangetic Plain and Chota Nagpur.	Hazaribagh	−3·3	−1·8	−1·0	+0·7	+0·5	+6·7	+1·5	+0·6	−0·1	+2·7	+1·2	+1·0	+0·7
	Darbhanga	−1·9	+0·8	−1·0	−0·1	+0·8	+1·1	+0·4	+0·7	+0·4	+2·8	−0·2	−0·2	+0·3
	Allahabad	−3·1	−1·3	−2·5	−0·7	+1·2	+7·2	+4·3	+0·5	−0·3	+1·5	+0·1	−0·4	+0·5

TABLE IX.—*Comparison of monthly mean air temperature in 1901 with the averages of past years*—contd.

Meteorological Province.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
		°	°	°	°	°	°	°	°	°	°	°	°	°
Upper Sub-Himalayas.	Dehra Dun	—2·9	—2·4	—1·3	—2·7	—1·9	+2·9	+0·8	—1·8	—1·9	+0·6	+0·2	—1·2	—1·0
	Roorkee	—2·1	—2·0	—1·4	—3·2	—1·8	+1·9	+1·3	—1·2	—0·9	+0·8	+0·2	—1·2	—0·8
	Meerut	—1·6	—1·6	—0·8	—1·9	+0·2	+3·3	+1·6	—0·5	+0·1	+2·1	+1·0	+0·8	+0·2
	Lahore	+0·5	+0·1	+2·8	—0·8	+0·8	+2·9	+0·7	+2·7	+2·1	+5·0	+3·2	+3·2	+1·9
	Ludhiana	0	—0·4	+0·9	—1·2	+0·3	+3·2	+0·9	+0·8	+1·3	+3·3	+2·5	+1·6	+1·1
North-West Frontier, Indus Valley and North-West Rajputana.	Peshawar	—1·6	—0·4	+1·4	—2·0	—1·7	—1·0	+2·5	+4·4	—0·7	+2·2	+1·4	+0·5	+0·4
	Jacobabad	—0·2	—2·6	+3·3	—1·1	+1·2	+3·0	+2·3	+1·9	—0·3	+3·6	+2·3	+1·1	+1·2
	Kurrachee	—0·6	—2·5	+2·7	+3·7	+2·2	+2·2	+2·0	+0·5	—0·1	+2·1	+1·9	+1·8	+1·3
East Rajputana, Central India and Gujarat.	Jaipur	—2·4	—1·3	+1·6	0	+2·1	+5·2	+4·1	+0·9	+2·2	+5·5	+2·8	+3·5	+2·0
	Deesa	—2·2	—4·0	+1·5	+0·5	+0·7	+3·3	+5·0	+1·5	+4·0	+5·6	+4·7	+4·3	+2·1
Deccan	Belgaum	+2·1	—1·5	+1·2	0	—1·4	+0·3	+0·4	+0·1	+1·8	+0·6	+1·4	+1·5	+0·5
	Sholapur	+3·1	—1·4	+0·2	—0·9	—0·9	+2·0	+0·8	—0·3	+3·0	+2·9	+2·1	+1·9	+1·0
	Poona	+1·4	—2·5	+1·4	+0·6	—0·5	+0·5	+0·5	—0·3	+1·5	+1·9	+0·8	+1·7	+0·6
	Akola	+0·1	—1·7	—0·4	—0·9	+1·2	+3·2	+0·5	—1·8	+1·5	+2·3	—0·1	+0·3	+0·4
	Buldana	—1·6	—3·5	—1·2	—0·7	+1·4	+2·7	+0·9	—1·2	+1·4	+2·5	+0·1	+0·6	+0·1
	Khandwa	—0·6	—1·5	+1·2	+1·1	+2·8	+4·4	+1·5	—0·4	+2·2	+5·8	+3·2	+2·9	+1·9
	Nagpur	+0·1	—2·0	—1·2	—1·2	—0·1	+3·5	+1·5	—1·4	+1·3	+2·8	+0·8	+0·4	+0·4
	Hyderabad (Deccan).	+3·7	—0·1	+0·1	0	—2·5	+0·9	—1·1	+0·6	+3·2	+1·7	+2·1	+1·4	+0·8
West Coast.	Bombay	—0·6	—2·3	+0·7	+0·8	+1·5	0	+0·3	+0·2	+1·8	+0·2	+1·7	+1·6	+0·5
	Karwar	+0·8	+0·	+0·7	+1·4	+0·6	—0·4	+0·9	+0·7	+0·9	+0·6	+2·2	+1·3	+0·8
South India.	Salem	+4·3	+3·9	+0·3	+0·3	+1·1	+2·1	+0·8	+1·2	+1·3	+1·6	+0·8	—0·4	+1·5
	Chitaldroog	+4·3	+0·2	+0·9	+2·2	+0·9	+1·3	+0·8	+0·7	+2·5	+1·2	+1·7	+0·5	+1·4
	Bangalore	+4·7	+2·2	—0·3	+1·1	+0·2	+0·8	+0·8	+1·2	+2·7	+1·5	+1·4	—0·2	+1·3
	Hassan	+3·0	+1·6	—0·1	+1·9	+0·8	+1·4	+0·4	+0·6	+2·2	+0·1	+0·3	—0·8	+1·0
	Mysore	+3·6	+2·5	+0·2	+2·0	+0·9	+0·5	+0·4	+1·1	+1·6	—0·2	—0·2	—0·8	+1·0
	Madras	+2·3	+2·9	—0·7	—0·6	+0·5	+1·3	+0·4	+0·1	+0·2	+1·0	—0·2	—1·1	+0·5
	Bellary	+4·8	+1·0	—0·1	+0·8	—1·4	+0·1	+0·7	+0·5	+2·3	+2·5	+1·0	+0·6	+1·1
Hill Station, Baluchistan.	Quetta	—0·5	—3·3	+3·2	—3·1	—0·6	—3·8	—0·5	+2·2	+0·9	+1·3	+2·1	—0·1	—0·2
Hill Stations, Northern India.	Leh	—5·9	—6·9	—0·2	—2·6	+1·2	—3·0	—3·0	+0·7	+0·3	+4·9	+2·6	0	—1·0
	Srinagar	+1·0	+3·5	+3·9	—3·4	—1·5	—4·0	—0·5	+3·1	—0·1	+4·6	+1·5	+0·7	+0·7
	Kailang	—4·7	+0·5	—1·3	—3·0	—0·6	—2·3	—1·8	+0·9	—2·0	+5·0	+5·1	+2·0	—0·2
	Simla (Ridge)	—5·2	—4·0	—0·8	—3·5	—1·9	+1·4	+0·9	—0·4	—2·5	+1·9	+0·5	—1·7	—1·4
	Chakrata	—5·0	—3·3	—0·7	—2·1	—1·3	+2·3	+0·2	—0·2	—1·6	+2·9	+1·3	—0·5	—0·7

TABLE IX.—*Comparison of monthly mean air temperature in 1901 with the averages of past years*—concld.

Meteorological Province.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
		°	°	°	°	°	°	°	°	°	°	°	°	°
Hill Stations, Northern India—*concluded.*	Ranikhet	−4·9	−2·2	−1·0	−0·9	+1·4	+4·4	+1·0	+0·1	−0·6	+2·3	+0·9	−1·1	0
	Katmandu	−1·9	+0·5	−0·5	+0·4	0	+0·4	−0·6	+0·2	−1·5	+1·7	+0·5	−2·2	−0·3
	Darjeeling	−2·4	+3·6	0	+1·6	+0·8	+1·5	+0·9	+1·3	+0·8	+2·1	+1·7	?	?
Hill Stations, Central India.	Mount Abu	−2·9	−4·0	+2·2	+0·8	+1·0	+2·7	+2·9	+0·6	+2·0	+3·4	+2·9	+2·4	+1·2
	Pachmarhi	−2·0	−2·1	−1·7	−0·8	+1·5	+4·5	+1·9	−0·8	+0·5	+3·4	+1·5	+1·0	+0·6
	Chikalda	−2·1	−3·5	−0·3	−0·8	+1·1	+4·2	+1·0	−0·9	+1·3	+3·2	+1·2	+1·1	+0·5
Hill Station, South India.	Wellington	+3·1	+2·6	−0·7	−0·3	−0·9	−0·1	0	+0·3	+0·1	+0·3	+1·0	+0·6	+0·5
Extra India.	Aden	+2·0	−1·2	−1·2	+0·6	+1·7	+0·8	+2·5	+1·5	+0·7	−0·8	+0·8	−0·6	+0·6
	Perim	+1·9	−0·9	−1·3	+0·1	+0·8	−0·1	+0·6	+1·1	+0·1	−0·6	+0·2	−0·2	+0·1
	Zanzibar	+1·3	−1·9	+1·3	+0·1	+0·3	−0·9	+0·1	−0·2	−0·9	−0·6	0	+0·1	−0·1
	Port Victoria (Seychelles).	−0·9	−1·1	−0·1	−0·3	−1·1	−1·2	−1·6	−2·1	−2·4	−1·3	−0·8	−1·3	−1·2
	Mauritius (Pamplemanses)	+0·4	−0·5	+0·5	−0·9	+1·5	−0·3	+0·4	−0·6	−1·0	+1·0	−0·6	−0·9	−0·1

TABLE X.—*Geographical summary of the temperature data of Table II in the Monthly Weather Reviews of 1901.*

Meteorological Area.	Number of stations.	January.	February.	March.	April	May.	June.	July.	August.	September.	October.	November.	December.	Year.
		°	°	°	°	°	°	°	°	°	°	°	°	°
North-West Himalaya	6	−4·1	−2·1	0	−2·6	−0·5	−0·2	−0·5	+0·7	−1·1	+3·6	+2·0	−0·1	−0·4
Sikkim Himalaya and Nepal.	1—2	−2·2	+2·1	−0·3	+1·0	+0·4	+1·0	+0·2	+0·8	−0·4	+1·9	+1·1	−2·2	+0·3
Punjab Plains	3	−0·4	−0·2	+1·7	−1·3	−0·2	+1·7	+1·4	+2·6	+0·9	+3·5	+2·4	+1·8	+1·2
Gangetic Plain	5	−2·3	−1·3	−1·4	−1·7	−0·3	+3·3	+1·7	−0·5	−0·5	+1·6	+0·3	−0·4	−0·1
Western Rajputana	4	−1·5	−3·3	+2·4	+1·0	+1·3	+2·8	+3·1	+1·2	+1·4	+3·7	+2·8	+2·4	+1·4
Eastern Rajputana and Central India.	1	−2·4	−1·3	+1·6	0	+2·1	+5·2	+4·1	+0·9	+2·2	+5·5	+2·8	+3·5	+2·0
Nerbudda Valley	1	−0·6	−1·5	+1·2	+1·1	+2·8	+4·4	+1·5	−0·4	+2·2	+5·8	+3·2	+2·9	+1·9
Chota Nagpur	1	−3·3	−1·8	−1·0	+0·7	+0·5	+6·7	+1·5	+0·6	−0·1	+2·7	+1·2	+1·0	+0·7
Lower Bengal	2	−1·8	+0·2	+0·4	+0·9	+1·2	+2·2	+0·9	+1·1	+0·8	+1·8	+0·2	+0·4	+0·7
Orissa	1	−1·1	−1·1	−1·0	−0·3	+0·6	+1·8	+0·8	0	+0·9	+1·5	+0·5	+0·2	+0·2
Central Provinces South and Berar.	5	−1·1	−2·6	−1·0	−0·9	+1·0	+3·6	+1·2	−1·0	+1·2	+2·8	+0·7	+0·7	+0·4
Konkan	2	+0·1	−1·1	+0·7	+1·1	+1·1	−0·2	+0·6	+0·4	+1·4	+0·4	+2·0	+1·5	+0·7
Deccan, Hyderabad and Mysore.	9	+3·3	+0·2	+0·4	+0·9	−0·4	+0·9	+0·4	+0·5	+2·3	+1·4	+1·2	+0·6	+1·0
East Coast and Carnatic	2	+3·3	+3·4	+0·1	−0·2	+0·8	+1·7	+0·6	+0·7	+0·8	+1·3	+0·3	−0·8	+1·0
Arakan and Pegu	4	+0·9	+1·9	+0·8	+1·0	+0·4	+0·7	+0·5	+0·1	+1·1	+0·3	+1·3	−0·6	+0·7
Bay Islands	2	+3·2	+3·0	+1·9	+2·6	+0·3	+0·3	−0·1	+0·5	+2·1	+0·1	+0·6	+0·7	+1·3
Extra-Tropical India	25—26	−2·3	−1·3	+0·3	−0·7	+0·4	+2·1	+1·2	+0·7	+0·2	+3·0	+1·6	+0·7	+0·5
Tropical India	25	+1·8	+0·4	+0·3	+0·6	+0·2	+1·3	+0·5	+0·1	+1·6	+1·3	+1·0	+0·4	+0·8
Whole India	50—51	−0·3	−0·5	+0·3	−0·1	+0·3	+1·7	+0·9	+0·4	+0·9	+2·1	+1·3	+0·6	+0·6

TABLE XI (*a*).—*Variations of the mean monthly maximum temperature from the normal in 1901 in the eleven meteorological provinces of India.*

Meteorological Provinces.	January.	February.	March.	April.	May.	June.	July.	August.	Sepember.	October.	November.	December.	Year.
	°	°	°	°	°	°	°	°	°	°	°	°	°
Burma Coast and Bay Islands	+1·7	—0·2	—0·5	+1·6	—0·7	+0·8	+0·2	—0·5	+1·6	—0·5	+0·5	—0·9	+0·3
Burma Inland . . .	—1·2	+0·9	+0·8	+1·3	—0·1	+0·6	+1·4	—0·2	—0·5	—0·2	—1·3	—1·9	0
Assam	—1·5	+2·3	+2·9	+0·7	+1·7	—0·8	+0·1	+0·2	—0·2	+0·7	—0·8	—0·6	+0·4
Bengal and Orissa . . .	—3·1	+0·1	+1·1	+1·6	+1·7	+1·6	+1·1	+0·8	+0·6	+1·9	0	+0·2	+0·6
Gangetic Plain and Chota Nagpur.	—6·2	—3·2	—2·5	—0·6	+1·0	+6·4	+3·5	+0·3	+0·4	+3·2	+2·2	+1·6	+0·5
Upper Sub-Himalayas . .	—5·6	—2·4	—1·4	—3·3	0	+4·3	+2·4	—0·3	+1·4	+2·8	+2·3	+1·3	+0·1
North-West Frontier, Indus Valley and North-West Rajputana.	—3·8	—1·7	+2·8	—0·2	+0·1	+3·3	+2·7	+2·2	+0·2	+2·7	+3·6	+2·0	+1·2
East Rajputana, Central India and Gujarat.	—4·7	—2·9	+1·0	—0·6	+0·9	+4·9	+5·7	—0·1	+4·3	+3·9	+4·1	+2·7	+1·6
Deccan	—1·3	—4·1	—2·1	—1·1	+0·1	+4·5	+2·2	—1·4	+3·1	+4·0	+2·5	+2·1	+0·7
West Coast	—0·5	—0·5	+1·0	+0·9	+0·8	+0·3	+0·9	+0·7	+0·8	—0·3	+0·8	+0·5	+0·5
South India	+2·5	+0·1	—1·2	—0·3	—0·1	+1·4	+1·0	+1·0	+1·8	+1·5	+0·1	0	+0·7

TABLE XI (*b*).—*Variations of the mean monthly minimum temper ature from the normal in 1901 in the eleven meteorological provinces of India.*

Meteorological Province.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	°	°	°	°	°	°	°	°	°	°	°	°	°
Burma Coast and Bay Islands .	+4·5	+4·0	+2·3	+2·5	+0·5	+1·0	+0·6	+0·4	+1·7	+1·1	+2·3	—0·6	+1·7
Burma Inland . . .	+0·2	+3·9	+0·1	+1·6	+0·5	+0·6	+0·4	+0·5	+0·5	+1·7	+2·3	+0·5	+1·1
Assam	—0·7	+2·2	—2·0	—0·5	+0·5	—0·5	+0·1	+0·6	—0·3	+0·9	+0·9	—0·4	+0·1
Bengal and Orissa . . .	+0·1	+2·1	—2·0	+0·4	+0·4	+0·4	+0·7	+0·8	+0·3	+1·3	+0·9	+0·2	+0·5
Gangetic Plain and Chota Nagpur.	+0·9	+2·8	—1·4	—0·4	+0·3	+2·2	+1·6	+0·8	—0·8	+2·0	+1·1	+0·4	+0·8
Upper Sub-Himalayas . .	+1·1	+0·7	+0·4	—2·4	+0·2	+1·0	+0·9	+1·6	—0·2	+2·6	+2·0	+1·0	+0·7
North-West Frontier, Indus Valley and North-West Rajputana.	—0·1	—2·9	+2·0	—1·0	+0·6	+0·9	+1·6	+2·3	—0·5	+2·5	+1·2	+0·4	+0·6
East Rajputana, Central India and Gujarat.	—0·5	—0·5	+1·0	—0·1	+1·8	+3·1	+2·6	+1·1	—0·2	+3·1	+3·1	+3·8	+1·5
Deccan	+2·2	+0·7	+0·8	+0·7	+1·1	+1·9	+0·8	+0·2	+0·3	+1·3	+1·3	+1·6	+1·1
West Coast	+2·0	+1·0	+1·0	+1·0	+0·9	+0·2	+1·0	+1·0	+1·0	+0·9	+1·7	+1·4	+1·1
South India	+4·0	+3·9	+0·3	+1·0	+0·1	+0·7	+0·5	+0·5	+1·2	+0·9	+1·0	—0·4	+1·1

TABLE XI (*c*).—*Variations of the mean monthly temperature from the normal in 1901 in the eleven meteorological provinces of India.*

Meteorological Province.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	°	°	°	°	°	°	°	°	°	°	°	°	°
Burma Coast and Bay Islands .	+3·1	+1·9	+0·9	+2·1	—0·1	+0·9	+0·4	0	+1·7	+0·3	+1·4	—0·8	+1·0
Burma Inland . . .	—0·5	+2·4	+0·5	+1·4	+0·2	+0·6	+0·9	+0·2	0	+0·8	+0·5	—0·8	+0·5
Assam	—1·1	+2·3	+0·4	+0·1	+1·1	—0·6	+0·1	+0·4	—0·3	+0·8	+0·1	—0·5	+0·2
Bengal and Orissa . . .	—1·5	+1·1	—0·4	+1·0	+1·1	+1·0	+0·9	+0·8	+0·5	+1·6	+0·5	+0·2	+0·6

TABLE XI (*c*).—*Variations of the mean monthly temperature from the normal in 1901 in the eleven meteorological provinces of India*—concld.

METEOROLOGICAL PROVINCE.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	YEAR.
	°	°		°	°	°	°	°	°	°	°	°	°
Gangetic Plain and Chota Nagpur.	−2·7	−0·2	−2·0	−0·5	+0·7	+4·3	+2·5	+0·6	−0·2	+2·6	+1·7	+1·0	+0·7
Upper Sub-Himalayas . .	−2·3	−0·8	−0·5	−2·9	+0·1	+2·7	+1·7	+0·7	+0·6	+2·7	+2·2	+1·2	+0·5
North-West Frontier, Indus Valley and North-West Rajputana.	−1·9	−2·3	+2·4	−0·6	+0·4	+2·1	+2·1	+2·2	−0·1	+2·6	+2·4	+1·2	+0·9
East Rajputana, Central India and Gujarat.	−2·6	−1·7	+1·1	−0·3	+1·4	+4·0	+4·2	+0·5	+2·1	+3·5	+3·6	+3·3	+1·6
Deccan	+0·5	−1·8	−0·7	−0·2	+0·6	+3·3	+1·5	−0·6	+1·7	+2·7	+1·9	+1·9	+0·9
West Coast	+0·8	+0·2	+1·0	+1·0	+0·9	+0·3	+1·0	+0·9	+0·9	+0·3	+1·3	+1·0	+0·8
South India	+3·3	+2·0	−0·5	+0·4	0	+1·0	+0·8	+0·8	+1·5	+1·2	+0·5	−0·3	+0·9

TABLE XII.—*Variations of the mean monthly and annual temperatures from the normal in 1901 in 55 of the 57 meteorological districts or divisions of India.*

PROVINCE.	DIVISION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	YEAR.
		°	°	°	°	°	°	°	°	°	°	°	°	°
BURMA . .	1. Tenasserim . .	+3·6	+1·6	+1·5	+1·8	+0·1	+1·4	+0·5	+0·1	+2·2	+0·5	+1·4	−0·8	+1·2
	2. Lower Burma Deltaic .	+2·7	+2·5	+0·9	+1·7	−0·2	+1·0	+0·6	+0·2	+1·8	+0·2	+1·8	−0·2	+1·1
	3. Central do. .	?	+2·0	−1·1	+2·2	−0·7	?	0	+0·1	+0·7	+1·4	+1·9	?	+0·7
	4. Upper do. .	−0·5	+2·4	+0·6	+1·4	+0·4	+0·6	+1·1	0	−0·4	+0·6	+0·2	−0·7	+0·5
	5. Arakan . . .	?	+1·1	?	?	+0·5	?	−0·1	−0·2	?	+0·3	+0·5	−1·8	0
BENGAL AND ASSAM.	6. Eastern Bengal . .	−1·1	+2·3	+0·7	+1·6	+1·1	−0·1	+1·1	+1·0	+0·2	+0·6	+0·4	+0·1	+0·7
	7. Assam, Surma . .	−0·2	+3·1	+2·7	+0·4	+2·0	+0·3	+1·3	+0·9	−0·1	+1·0	0	−0·4	+0·9
	9. Do. Brahmaputra .	−1·6	+1·8	−0·7	−0·1	+0·7	−1·1	−0·5	+0·1	−0·3	+0·8	+0·1	−0·6	−0·1
	10. Deltaic Bengal . .	−1·8	+0·2	−0·5	+1·1	+1·0	+1·1	+0·7	+1·0	+0·6	+1·4	+0·5	0	+0·4
	11. Central do. . .	−1·4	+1·7	−0·8	+0·7	+0·8	0	+1·0	+1·0	+0·4	+2·0	+0·8	+0·5	+0·6
	12. North do. . .	−2·2	+2·3	−0·7	+1·2	+1·8	+0·2	+0·7	+1·0	+0·6	+2·0	+0·2	+0·2	+0·6
	13. Bengal Hills . .	−2·5	+4·8	−1·3	+1·8	+1·0	+1·8	+0·4	+1·0	−0·1	+2·1	+1·5	?	+1·0
	14. Orissa . . .	−1·4	−0·8	−1·0	+0·5	+0·4	+3·6	+1·0	+0·4	+0·8	+1·7	+0·4	+0·2	+0·5
	15. Chota Nagpur . .	−3·0	−0·6	−2·2	−0·5	+0·7	+4·9	+1·6	+0·7	0	+2·6	+1·3	+1·7	+0·6
	16. South Bihar . .	−2·2	+0·5	−2·1	+0·3	+0·8	+3·5	+1·9	+0·2	−0·2	+3·3	+1·8	+1·5	+0·8
	17. North do. . .	−1·7	+1·0	−1·5	+0·6	+1·6	+1·5	+0·9	+0·7	+0·6	+2·9	+0·8	+0·1	+0·6
UNITED PROVINCES OF AGRA AND OUDH.	18. United Provinces, East	−2·5	−0·7	−2·7	−1·4	+0·6	+5·4	+4·3	+0·8	−0·5	+2·3	+2·2	+0·8	+0·7
	19. South Oudh . .	−2·9	−0·4	−1·6	−1·2	+0·8	+4·2	+3·7	+0·3	−0·3	+1·5	+2·1	+1·4	+0·6
	20. North do. . .	−2·6	+0·1	?	−0·3	−0·2	+4·0	+1·9	+1·3	−0·7	+2·5	+1·3	+0·5	+0·7
	21. United Provinces. Central.	−3·6	−1·2	−0·2	−0·5	+2·8	+6·3	+4·7	+0·4	+0·6	+3·4	+4·4	+1·4	+1·5
	22. Do. do., West	−3·0	−0·9	−0·7	−2·3	+0·4	+4·8	+3·7	+0·5	+1·5	+3·5	+2·9	+1·7	+1·0
	23. Do. do., East	−2·6	−0·2	−2·0	−0·6	+0·6	+1·6	+1·1	0	−1·0	+2·7	+2·0	+0·6	+0·2
	24. Do. Submontane. do., West	−2·4	−1·2	−1·7	−2·9	−0·4	+2·6	+2·3	−0·5	−0·6	+1·4	+1·7	+0·5	−0·1
	25. Do. Submontane. do., Hills	−5·2	−1·8	−1·5	−1·8	+0·8	+3·7	+1·6	0	−0·6	+2·7	+1·9	−0·7	−0·1

TABLE XII.—*Variations of the mean monthly and annual temperatures from the normal in 1901 in 55 of the 57 meteorological districts or divisions in India*—concld.

Province.	Division.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
		°	°	°	°	°	°	°	°	°	°	°	°	°
Punjab and North-West Frontier Province.	26. South-East Punjab .	—3·7	—1·9	—1·4	—2·9	+0·8	+3·6	+2·6	+0·4	+1·6	+2·8	?	+1·3	+0·3
	27. South do. .	—2·8	—1·5	+0·1	?	+0·3	+3·2	+1·8	+2·7	+2·7	+3·1	+2·4	+1·1	+1·2
	28. Central do. .	—0·6	+0·5	+1·7	—2·0	+0·7	+2·3	+0·5	+2·5	+1·8	+4·3	+4·0	+2·3	+1·5
	29. Punjab Submontane .	—2·1	—0·3	+0·4	—3·7	—0·2	+2·2	+1·1	+1·2	+0·6	+3·5	+1·9	+1·2	+0·5
	30. Do. and North-West Frontier Province Hills	—4·0	—2·6	+0·1	—3·6	—1·5	—1·7	—1·0	+1·2	—1·7	+3·0	+2·0	—0·3	—0·8
	31. North Punjab .	—2·2	—0·9	+0·9	—2·8	—1·5	—1·1	+2·0	+4·1	—0·8	+2·8	+2·2	+1·1	+0·3
	32. West do. . .	—2·0	—2·0	+3·1	—2·0	—1·0	+1·4	+1·7	+2·6	—0·4	+2·8	+2·2	+1·0	+0·6
Bombay and Malabar Coast Districts (Madras.)	33. Malabar . . .	+2·0	+1·5	+1·0	+0·8	+0·9	+1·0	+1·3	+1·2	+0·7	+0·7	+0·2	+0·2	+1·0
	34. Madras, South Central	+3·8	+3·6	+0·2	+0·6	+0·6	+1·1	+0·9	+1·2	+0·8	+0·9	+0·4	—0·7	+1·1
	35. Coorg . . .	+3·6	+0·9	+1·0	+0·8	—0·1	+0·2	—0·1	—0·3	+1·6	0	+0·9	—0·1	+0·7
	36. Mysore . . .	+4·1	+2·3	+0·1	+1·3	—0·2	+0·5	+0·4	+0·6	+2·1	+0·9	+0·8	—0·2	+1·1
	37. Konkan . . .	—0·3	—0·7	+1·1	+1·1	+1·0	—0·2	+0·8	+0·7	+1·0	+0·1	+2·2	+1·8	+0·7
	38. Bombay Deccan .	+2·4	—2·0	+0·8	+0·7	—0·8	+1·2	+0·8	0	+2·3	+2·4	+2·3	+2·5	+1·1
	40. Khandesh . . .	+0·8	—3·4	+1·4	+1·5	+0·9	+2·2	+1·7	+1·0	+2·9	+3·7	+2·2	+2·6	+1·5
Central Provinces and Berar.	41. Berar . . .	—0·1	—2·2	—0·4	—0·2	+1·7	+4·0	+1·0	—1·9	+1·8	+3·0	?	+1·8	+0·8
	42. Central Provinces, West	—1·1	—1·9	—0·7	—0·4	+1·4	+4·7	+2·3	—1·1	+1·3	+3·6	+2·4	+2·9	+1·1
	43. Do., Central	—1·2	—1·7	—1·5	—1·0	+1·1	+4·1	+2·0	—1·5	+0·3	+2·5	+1·6	+1·4	+0·5
	44. Do., East .	—0·9	—1·5	—3·6	—1·3	+0·7	+5·0	+1·2	—1·2	+1·1	?	+0·6	+0·4	0
Bombay (North)	45. Gujarat . . .	0	—2·8	+2·8	+0·8	+0·6	+3·8	+3·0	+0·6	+2·7	+3·9	+4·2	+4·2	+2·0
	46. Kathiawar and Cutch .	—2·5	—1·0	+1·1	+1·2	+0·3	+2·8	+2·2	+0·6	+0·8	+0·7	+2·8	+2·7	+1·0
	47. Sind . . .	—1·7	—3·3	+2·6	+1·1	+1·5	+2·8	+1·8	+0·8	—0·4	+1·8	+2·7	+1·5	+0·9
	48. Baluchistan Hills .	—0·8	—3·6	+4·1	—4·3	—0·8	—3·9	—1·1	+1·3	+0·4	+0·9	+3·2	+1·0	—0·3
Rajputana and Central India.	49. Central India, East .	—2·6	—1·5	+0·3	—1·0	+1·7	+5·0	+4·6	—0·5	+1·3	+4·0	+3·0	+2·7	+1·4
	50. Rajputana, East, Central India, West.	—3·0	—1·8	+1·1	—0·4	+2·2	+4·4	+5·5	+1·4	+3·1	+5·0	+4·4	+3·8	+2·1
	51. West Rajputana .	—2·6	—1·6	+1·2	—0·9	+2·7	+5·2	+5·0	+3·1	+2·2	+4·8	+2·6	+1·6	+1·9
Madras .	52. East Coast, North .	+2·1	—0·6	—0·5	—0·1	+0·6	+1·9	+0·2	—0·3	+1·5	+0·5	+0·5	—0·3	+0·5
	53. Hyderabad, South .	+3·3	—0·5	—1·0	+0·4	—1·8	+1·3	+0·2	+0·4	+3·1	+2·0	+2·1	+1·7	+0·9
	54. Madras, Central .	+4·8	+1·6	—0·4	+0·9	—0·9	+1·3	+1·2	+1·3	+3·0	+2·6	+1·6	+0·4	+1·5
	55. East Coast, Central .	+3·5	+1·4	—1·1	—0·5	—0·2	+1·5	+0·4	—0·1	+2·2	+1·1	+0·1	—1·0	+0·6
	56. Do., South .	+2·9	+3·4	—0·4	+0·2	+0·6	+1·1	+1·3	+1·3	+0·7	+1·6	+0·2	—0·2	+1·1
	57. Madras, South .	+1·9	+2·3	—1·5	—1·5	—0·	—0·5	+0·6	+1·1	+0·4	+1·4	—0·4	—0·3	+0·3

The cold weather period (January and February 1901).—The following summarizes the chief features of the weather of India during the period.

Seven depressions, three of which probably originated in Kathiawar, affected the weather of Northern India during January. The fourth storm of the month (9th to 14th), which originated in Persia and gave rise in India to a secondary depression in Punjab, gave heavy snow over the hills and general rain in the plains of Northern India.

The precipitation of the month was in defect only in Assam, Surma, East Bengal and Burma, and exceeded the normal everywhere else, except in the West Punjab and in the Assam Hills, where it was normal. The temperature conditions changed rapidly in Northern India during the month, the warm and cool waves following each other at very short intervals as the various storms of the month moved eastwards. In consequence of the shortness of the intervals between the storms the warm and cool waves were in general only slightly marked. The cool wave which followed the fourth storm of the month was, however, of unusual intensity, and was an exception to the general rule. The lowest temperatures of the month, which were, however, not unusually low, were recorded during the passage of this cold wave.

Temperature was throughout the month in more or less considerable excess in the Peninsula and in Burma and in defect in Northern India.

In February seven depressions, three of which formed in Khandesh or North Bombay, and the remainder in Baluchistan or Upper India, gave moderate rain over North-Western India and numerous thundershowers to Northern and Central India and the North Deccan.

The rainfall of the month was in defect only in North Bombay, Khandesh, West Rajputana, Assam and the greater part of Bengal and was in excess elsewhere.

A noteworthy feature of the temperature conditions during February was the persistent low temperature over Kathiawar and Sind during the second-half of the month—a feature all the more remarkable that in these areas practically no rain fell in February.

The rainfall of the period was in excess over the whole of India except in Assam and Sind, the excess being most marked in the Gangetic Plain, the Central Provinces, Chota Nagpur and Berar, in which the precipitation of the period was from three to four times the normal amount. The rainfall was in these areas almost continuous.

The snowfall of the period was excessive in the Western Himalayas and about normal in Afghanistan and Baluchistan.

The mean temperature of the period was relatively much lower in Extra Tropical than in Tropical India, being 1°·8 in defect in the former and 1°·1 in excess in the latter area.

The temperature conditions of the period were directly related to the following abnormal features:—

(1) The number of cold weather storms was greater than usual; the storms, however, were for the most part feeble.

(2) The rainfall of the period was in general excess and the snowfall normal in amount on the hills to the west of India and in excess in the Western Himalayas.

The following gives a summary of the leading features of the temperature conditions during the period:—

(1) The mean maximum or day temperature was in January in defect to the west and north of a line running from Mangalore along the Western Ghats to near Bombay, thence about due east to Vizagapatam, thence north-east to Silchar, and thereafter south-east through Burma to near Fort Stedman. The defect was greatest and exceeded 6° in a large area, including the greater part of the Indo-Gangetic Plain, Chota Nagpur and the east of the Central India Plateau and from that diminished slowly to the west and rapidly to the south and east. Temperature was in moderate to considerable excess over the remainder of India, the excess being greatest and exceeding 4° in the Madras Deccan. The mean day temperature was in February in moderate to considerable defect over by far the greater part of the country; it was in slight excess only in the extreme south of the Peninsula, in East and North Bengal, Assam and Upper Burma. The defects were greatest and exceeded 4° in the East Satpuras and the east of the Central India Plateau and the east of Hyderabad. In the region indicated by the stations Bhuj and Rajkot the mean day temperature was from 4° to 6° lower than usual. The following gives comparative data for the various provinces:—

Area.	Variation of mean maximum temperature from normal in		
	January.	February.	Cold weather period, January and February.
	°	°	°
Burma	+0·7	+0·3	+0·5
Assam	—1·5	+2·3	+0·4
Bengal	—2·8	+0·7	—1·1
Orissa	—3·5	—2·0	—2·8
Bihar	—4·9	—1·9	—3·4
Chota Nagpur	—6·6	—4·6	—5·6
United Provinces of Agra and Oudh	—6·2	—3·1	—4·7
Punjab	—4·9	—1·9	—3·4
Sind	—3·9	—2·0	—3·0
Rajputana	—4·9	—2·7	—3·8
Gujarat	—2·9	—0·6	—1·8
Central India	—5·2	—3·9	—4·6
Central Provinces	—3·6	—4·6	—4·1
Berar	—1·6	—3·6	—2·6
West Coast	—0·5	—0·5	—0·5
Bombay Deccan	+1·5	—3·5	—1·0
Mysore	+4·0	+0·5	+2·3
Madras Coast	+1·6	—0·2	+0·7
Madras Deccan	+2·9	—2·0	+0·5
South India	+2·5	+1·1	+1·8

The variations were larger than usual and were such as accompany a more disturbed cold weather than usual. The most important variation was a large defect over the area represented by the following stations :—

Station.	Variation of mean maximum temperature from normal in January.	Variation of mean maximum temperature from normal in February.	Variation of mean maximum temperature from normal in Cold weather period, January and February.
	°	°	°
Leh	—11·4	—12·3	—11·9
Nowgong	—7·3	—6·0	—6·7
Benares	—7·2	—5·3	—6·3
Murree	—7·9	—4·1	—6·0
Chaibassa	—7·2	—4·3	—5·8
Delhi	—7·6	—3·9	—5·8
Ludhiana	—6·7	—4·6	—5·7
Gaya	—6·3	—5·0	—5·7
Jhansi	—6·9	—4·2	—5·6
Sutna	—6·8	—4·1	—5·5
Hazaribagh	—6·0	—4·8	—5·4
Allahabad	—6·7	—3·9	—5·3
Hoshangabad	—5·8	—4·7	—5·3
Chakrata	—6·5	—3·5	—5·0

(2) The mean minimum or night temperature was in January about normal in Extra, Tropical and in moderate to considerable excess in Tropical India, the excess exceeding 6° at Kurnool and at Mergui and exceeding 4° over the Madras Deccan, the south-east of the Central Provinces and in the East Coast Central, as also in Lower Burma. In February the night temperature was in moderate to considerable defect in Kathiawar and Sind, the defect exceeding 7° at Bhavnagar and exceeding 5° at Hyderabad, Bhuj and Rajkot. The defect in the night temperature in that area in February was even more marked than the defect in the day temperatures. In this month, night temperatures were in defect over the region lying to the west of a line passing from the West Coast near Goa and Ratnagiri first north-eastwards to Seoni, thence north-west to Ajmere and thence about due north to near Rawalpindi, and was in excess over the greater part of the remainder of India. The excess in the night temperature was most marked in South India and in Burma, the excess in the former area amounting to 7° at Salem and exceeding 4° over parts of the Madras Deccan and the Madras Coast, and in the latter exceeding 4° over the area defined by the stations, for which data are given below :—

Station.	Variation of mean minimum temperature from normal in February.
	°
Bassein	+6·9
Yamethin	+6·2
Rangoon	+5·2
Thayetmyo	+5·1
Toungoo	+5·0
Taunggyi	+4·3
Minbu	+4·1

The excess was over 6° only at Yamethin and Bassein. The variations of the night temperatures in other parts of the country were in general small and unimportant.

The following gives comparative data for the various provinces for the cold weather period :—

Area.	Variation of mean minimum temperature from normal in January.	Variation of mean minimum temperature from normal in February.	Variation of mean minimum temperature from normal in Cold weather period, January and February.
	°	°	°
Burma	+3·0	+4·0	+3·5
Assam	—0·7	+2·2	+0·8
Bengal	—0·3	+2·5	+1·1
Orissa	+0·8	+0·5	+0·7
Bihar	+1·0	+3·4	+2·2
Chota Nagpur	+0·6	+3·5	+2·1
United Provinces of Agra and Oudh	+0·8	+1·7	+1·3
Punjab	+0·6	—0·1	+0·3
Sind	+0·6	—4·5	—2·0
Rajputana	—0·5	—0·6	—0·6
Gujarat	—0·8	—3·2	—2·0
Central India	+0·1	+0·9	+0·5
Central Provinces	+1·5	+1·2	+1·4
Berar	+1·5	—0·7	+0·4
West Coast	+2·0	+1·0	+1·5
Bombay Deccan	+2·2	—1·1	+0·6
Mysore	+4·1	+4·0	+4·1
Madras Coast	+3·7	+2·9	+3·3
Madras Deccan	+5·2	+4·1	+4·7
South India	+3·3	+5·1	+4·2

(3) The variations of the mean temperature in both months of the cold weather period exhibited features similar to those which characterized the variations of the mean day and mean night temperatures, *viz.*, deficient temperatures over Extra-Tropical and excessive temperatures over Tropical India in January and excessive temperatures in February in the part of the Peninsula south of Lat. 16° N. and in North-East India and Burma and deficient temperatures elsewhere. The excess was in January most marked over the Madras Presidency, where it generally exceeded 4°, and the defect, most marked in the central districts of the United Provinces where it exceeded 3°. In February the variations from normal were in general less striking; they exceeded 4° only in Sind and Kathiawar and at Salem in the Madras Presidency.

The following gives comparative data for the various provinces:—

Area.	Variation of mean temperature from normal in		
	January.	February.	Cold weather period, January and February.
	°	°	°
Burma	+1.9	+2.2	+2.1
Assam	−1.1	+2.3	+0.6
Bengal	−1.6	+1.6	0
Orissa	−1.4	−0.8	−1.1
Bihar	−2.0	+0.5	−0.6
Chota Nagpur	−3.0	−0.6	−1.8
United Provinces of Agra and Oudh	−2.7	−0.7	−1.7
Punjab	−2.2	−1.0	−1.6
Sind	−1.7	−3.3	−2.5
Rajputana	−2.7	−1.7	−2.2
Gujarat	−1.9	−1.9	−1.9
Central India	−2.6	−1.5	−2.1
Central Provinces	−1.1	−1.7	−1.4
Berar	−0.1	−2.2	−1.2
West Coast	+0.8	+0.3	+0.6
Bombay Deccan	+1.9	−2.3	−0.2
Mysore	+4.1	+2.3	+3.2
Madras Coast	+2.7	+1.4	+2.1
Madras Deccan	+4.1	+1.1	+2.6
South India	+2.9	+3.1	+3.0

The following gives a brief statement of the more important cool waves of the period:—

(1) ***Cold wave of the 13th to 21st January.***—The mean temperature was generally low during the greater part of the first fortnight of the month in Kathiawar and Gujarat. But it rose above normal in Baluchistan and Sind on the 10th and 11th with the advance of the fourth storm of the month (10th—15th). The depression entered Sind on the morning of the 12th and subsequently advanced eastwards, giving heavy rain on the plains and exceptionally heavy snow on the hills. A cold wave followed in the rear of this disturbance and reduced temperatures very considerably below normal as it passed eastwards. The reduction of temperature was greatest in Baluchistan and Sind on the 15th when the mean temperature was more than 16°, and 11°, below normal in Baluchistan and Sind, respectively. The crest of the cold wave lay over Rajputana on the 17th, Rajputana and the United Provinces on the 18th, Central India on the 19th, and the Central Provinces, Bihar and Bengal on the 20th, and reached Assam on the 21st. In the cold wave, as is usual in January, the reduction of temperature was more marked in the day, than in the night, temperature.

The following gives temperature variation data for the areas traversed by the wave:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of								
	13th January.	14th January.	15th January.	16th January.	17th January.	18th January.	19th January.	20th January.	21st January.
	°	°	°	°	°		°	°	°
Baluchistan	−8.4	−13.2	−16.3	−7.3	−0.6	−2.2	+2.3	+1.9	−4.8
Sind	−0.5	−2.7	−11.7	−7.7	−6.9	−5.9	−1.0	+1.1	+2.4
Punjab	+0.2	−1.3	−5.0	−4.5	−5.3	−4.6	−2.4	−2.1	−1.4
United Provinces of Agra and Oudh.	+0.2	−0.7	−3.9	−4.4	−4.2	−5.0	−5.2	−4.3	−4.0
Rajputana	+3.0	+4.1	−8.0	−5.8	−6.9	−7.4	−6.5	−1.4	−1.9
Central India	+2.9	+4.5	−4.1	−8.1	−5.6	−5.9	−8.9	−5.5	−1.3
Berar	+5.3	+4.1	−1.5	−6.4	−1.3	+0.2	−7.6	−7.5	−4.5
Central Provinces.	+2.2	+3.1	−0.4	−5.0	−2.4	−1.5	−7.4	−7.5	−4.0
Orissa	−5.5	−4.8	−3.5	−0.6	−0.3	+1.6	−3.3	−6.3	−5.7
Chota Nagpur	−6.3	−3.8	−3.5	−3.1	−3.1	−3.4	−7.6	−7.3	−6.2
Bihar	−2.7	−1.4	−1.6	−3.2	−3.6	−2.0	−2.6	−5.5	−3.9
Bengal	−3.7	−1.9	−0.3	−0.1	−1.2	−0.8	−2.5	−5.7	−5.0
Assam	−3.3	−3.0	−1.2	−1.4	−1.8	−3.9	−0.7	−3.4	−3.4

(2) ***Cold period from the 5th to the 23rd February terminating in the cold wave of the 24th to the 28th.***—The temperature conditions during February present several points of interest. At the beginning of the month the temperature exceeded the normal everywhere, the excess being most marked in Gujarat Khandesh and Rajputana. Excessive temperatures persisted in that area till the 4th or 5th, when the dry northerly or north-westerly winds, which sprang up in

Upper Sind as a depression passed from the Gulf of Cambay eastwards over North India, reduced humidity considerably in Upper Sind on the 4th and by the 5th had brought a very considerable reduction of temperature to Gujarat and Khandesh.

The fall of temperature in Gujarat on the 5th was most marked at Veraval, where the maximum temperature on that day was, if correct, 17°·4 below the value recorded on the previous day. Meantime temperature had remained steady or had risen in Upper Sind and the South-West Punjab. By the 6th, the area of low temperature had extended slightly and included the whole of Sind and Gujarat and parts of Khandesh and Rajputana. The unusual feature in the temperature condition was the extension of low temperature from a centre in Gujarat instead of, as is usual after the eastward retreat of cold weather storms, from Baluchistan and the North-West Frontier. The centre of low temperature intensified on the 7th and 8th without changing its position, the area of low temperature at the same time extending. It is to be noted that coincident with the fall of temperature in Gujarat and Sind, the humidity also decreased more or less briskly.

The following gives data:—

Station.	6th February.			7th February.			8th February.		
	Variation from normal of mean daily temperature.	Change in past 24 hours of		Variation from normal of mean daily temperature.	Change in past 24 hours of		Variation from normal of mean daily temperature.	Change in past 24 hours of	
		Temperature.	Relative humidity.		Temperature.	Relative humidity.		Temperature.	Reative humidity.
Veraval . .	−3°·3	−2°·0	−6	−5°·1	−1°·7	−3	−6°·7	−1°·8	−11
Bhavnagar Para	−3·9	−4·0	−11	−6·3	−2·5	−1	−7·4	−1·8	−18
Surat . .	−4·8	−5·8	−4	−7·0	−2·4	+1	−6·0	+1·0	−24
Ahmedabad .	−5·9	−4·8	−11	−8·6	−2·5	−5	−6·5	+1·7	−13
Malegaon .	+0·3	−5·2	+12	−3·9	−4·2	−24	−6·5	−2·5	−9
Ahmednagar .	+1·6	−2·7	+21	−3·6	−5·4	−12	−4·0	−0.2	−30

The unusual position of the centre of low temperature after the passage of this storm is probably to be associated with the unusual southerly course of the depression. Instead of passing in an east-south-easterly direction from Upper Sind or the South-West Punjab, it apparently passed in a direction a little north of east from the Gulf of Cambay, at the same time giving rise to a secondary depression in the Punjab, which persisted from the 4th to the 6th and gave moderate rain over the greater part of the east and submontane regions of the Punjab, and of the United Provinces. After this depression had passed off, anti-cyclonic conditions were established over Upper India. These conditions were more marked in Lower Sind and Gujarat than in the north of the Punjab, where pressure was very uniform and winds light with numerous calms. In Gujarat, on the other hand, gradients were unusually steep for northerly winds. It seems, therefore, not improbable that an anti-cyclonic system with descending currents of air prevailed over the north-west part of Rajputana and Upper Sind, sufficiently pronounced to check the usual northerly drift of air over the Punjab and give general calms, while at the same time accentuating the flow to the south of the anti-cyclonic area.

Station.	7th February.				8th February.			
	Wind direction.		Wind velocity.		Wind direction.		Wind velocity.	
	Actual.	Normal.	Actual.	Normal.	Actual.	Normal.	Actual.	Normal.
Rajkot . . .	W	N 24° E	6	6	N W	N 34° E	4	5
Veraval . .	N E	N 24 E	9	8	N N E	N 20 E	9	7
Bhavnagar Para .	W	N 71 W	6	5	W	N 36 W	5	5
Bhuj . . .	S W	S 23 E	7	6	W	N 14 W	5	6

This hypothesis of a descending current over Upper Sind and West Rajputana, if correct, affords a satisfactory explanation of the fall in humidity and temperature over the areas to the south and also throws some light on the fact that the low temperatures did not as usual advance from the North-West Frontier areas. For if the usual drift over the Punjab from the north was checked by these conditions the flow of cool air from the Baluchistan plateau and hill regions of the North-West would also cease, and hence the fall of temperature in the North-West and West Punjab would be less than usual.

Possibly also this feature may have been related to the fact that the precipitation accompanying the storm on the Baluchistan and Afghan Hills was practically *nil*. The temperature in the areas to the west would thus be less reduced than usual, and the cooling in the adjacent plains would be slight.

By the 9th a second depression had passed into the Peninsula from near the Gulf of Cambay or even farther south, which during the next two or three days drifted slowly in a direction almost due east over the head of the Peninsula, the track of its centre lying roughly along Lat. 20 N. A secondary depression which developed over the Madras Coast on the 12th, seemed to persist till the 16th or 17th, *i.e.*, some days after the disappearance of the original depression on the 13th or 14th. The secondary depression was most marked on the 13th when readings on the Madras Coast South were more than a tenth of an inch below normal.

The appearance of a depression over Madras at this season is very unusual and seems to have been more or less directly related to the abnormal temperature conditions of the month in that area.

With the advance over the head of the Peninsula of the depression from the North Bombay Coast, temperature rose slightly over North India and briskly in the area where temperature was lowest during the preceding days, the rise being probably accentuated by the advance across the Punjab of a depression which shewed near Mooltan on the 11th and by the 12th had passed east to the foot of the Simla and Mussooree hills. On the 12th, as the Punjab depression was passing off and as the Madras depression was deepening, temperature again fell in Upper Sind and Gujarat, the fall extending farther south than usual. On the 13th two cold centres, each with defects from the normal exceeding 10°, appeared, one over Rajputana, the other extending from Khandesh to the Bombay Deccan as far south as Belgaum. The former was directly related to the eastward movement of the Punjab depression, the latter to the development of the Madras depression. The rise of pressure in the rear of the former depression coincided with the fall of pressure over the south-east of the Peninsula accompanying the development of the latter depression, and thus gave very unusual gradients for north or north-westerly winds over the greater part of the Deccan as far south as Mysore, and led to a much greater extension of cool north winds than obtains, when a rise of pressure in North India does not coincide with a fall in the South.

On the 13th temperature was unusually low in Bengal, where, as the primary Bombay depression passed eastwards, moderate general rain had fallen.

On the 14th a rapid rise of pressure in North India gave slight gradients to the north of Rajputana and increased the gradients towards the south. As at this time there were indications of disturbed conditions on the North-West Frontier, temperature was rising in the extreme north, but was falling over almost the whole of the remainder of India in consequence of the extension of northerly winds over the Peninsula. The abnormal defect in the mean at Ahmednagar was over 12°, and much lower temperatures than usual were shewn as far south as Mangalore, Kurnool and Masulipatam. At the same time the cold wave in Upper India had moved east to the centre of the United Provinces and the extended rainfall in North-East India had caused a very considerable reduction of temperature in that area and restricted the area of excessive temperature in the south of the Peninsula and diminished the intensity of the hot area in Burma.

These conditions persisted with little change during the next two days, during which pressure rose very generally over India, except in the extreme south, and thus accentuated the abnormal gradients for dry northerly winds over the country. On the 16th pressure was in large excess in North India (Gorakhpur +·155″) and about normal or in slight defect in the south of the Peninsula. On this date, however, the approach of another depression began to shew over Gujarat and gradients for north-east winds became much steeper. In consequence of the advance of these cool winds a cold area re-appeared over Gujarat, where temperature was falling slightly, although elsewhere temperature was rising steadily. Pressure was on this day remarkably uniform over the north of Rajputana and the Central Punjab, where a faint irregular cyclonic circulation was shewing. At the same time the isobars were unusually close together over the head of the Peninsula between Lat. 20° and 24° N, where they lay almost along the parallels of latitude. Consequently unusually regular easterly winds obtained over the whole of this belt from Gujarat to Bengal.

By the 18th the depression from the North Bombay Coast had passed over Khandesh and by causing a rush of south winds over the Peninsula had raised the temperature there very considerably. Similarly a fall of temperature occurred over Gujarat and Sind caused by the northerly winds in the north-west quadrant of the depression On this day the depression gave general rain to the greater part of Upper and Central India and over parts of the Peninsula, so that on the 19th and 20th temperature fell generally over the greater part of the country as anticylonic conditions were re-established. On the latter date pressure was normal on the South Konkan Coast and about one-fifth of an inch in excess in Gujarat, so that gradients were steep for north winds over the whole of the West Coast, and especially in Gujarat, temperature being from 8° to 10° lower than usual in that area. Temperature was in almost as great defect in the West Satpuras, where northerly or north-easterly winds held steadily. By the 21st pressure conditions had altered considerably. The advance to Central Rajputana on that day of a depression, the first indication of which shewed at the stations of Upper Sind on the 20th, caused a fall of pressure in Rajputana of nearly a quarter of an inch and produced a small centre of low pressure near Jodhpore. This distribution of pressure did not check the northerly winds in Gujarat, where they still held with considerable steadiness, and where, consequently, temperature remained in considerable defect.

By the 22nd the depression had moved east to near Allahabad and had given rise to a moderately deep secondary depression in the Punjab. A large anti-cyclonic area at this time lay over Rajputana, Khandesh and the west of the Central Provinces, over the southern areas of which both temperature and humidity had fallen very rapidly. The following gives data :—

Station.	22nd February.		
	Variation from normal of mean daily temperature.	Change in past 24 hours of	
		Temperature.	Relative humidity.
	°	°	
Goa	— 5·9	— 2·5	—11
Mormugao	— 3·7	— 2·6	—13
Ratnagiri	— 6·0	— 5·8	—16
Bombay	—10·6	—11·2	— 3
Belgaum	— 4·2	— 5·5	—10
Bijapur	— 2·1	— 2·5	—48
Sholapur	— 2·2	— 1·5	—32
Poona	—11·2	— 7·2	—11
Ahmednagar	— 8·8	— 7·3	— 5

Station.	22nd February. Variation from normal of mean daily temperature.	Change in past 24 hours of: Temperature.	Relative humidity.
	°	°	
Malegaon	—16·0	—14·4	—15
Surat	—13·8	— 7·6	—62
Akola	—13·6	—12·2	—41
Amraoti	—14·4	— 7·3	— 43
Khandwa	—14·1	—10·2	—25
Hoshangabad	—11·2	— 7·5	—22
Nagpur	—10·0	— 1·5	—47
Seoni	— 9·0	— 2·0	—47
Pachmarhi	—11·2	— 7·7	—48
Jubbulpore	— 6·9	— 2·7	—46
Saugor	— 9·7	— 4·0	—41

It may be noted, however, that over Gujarat and parts of Rajputana, although temperature had fallen, humidity had increased, a consequence probably of the disturbed conditions to the north. The following gives data.—

Station.	22nd February. Variation from normal of mean daily temperature.	Change in past 24 hours of: Temperature.	Relative humidity.
	°	°	
Ahmedabad	—13·0	—4·2	—1
Rajkot	—16·5	—5·7	+12
Veraval	— 9·2	—3·8	+10
Dwarka	...	—8·7	+10
Bhavnagar Para	—13·1	—6·1	+ 3
Bhuj	—12·8	—3·5	+10
Deesa	—16·3	—8·3	+13
Mount Abu	—17·4	—7·7	+36
Bikaner	— 9·9	—2·7	+23
Jodhpur	...	—5·6	+15
Udaipur	...	+1·0	—3
Ajmer	— 9·3	—2·0	+13
Sambhar	—10·3	—3·2	+35
Jaipur	—12·4	—3·5	+49

On the 22nd the mean temperature was over 1·6 below normal in the area indicated by Deesa and Rajkot and at Malegaon, and temperature was lower than usual over the whole of India, except the East Coast and in Burma and Assam, where slight to moderate excesses still shewed.

A very rapid rise of pressure followed on the 23rd, greatest in the extreme north-west, where it amounted to nearly one-third of an inch, pressure rising at the same time to an excess over normal of one-fourth of an inch. During the remaining days of the month this anti-cyclonic distribution spread slowly eastward, diminishing in intensity as it passed, till by the 28th it had practically disappeared.

With the eastward movement of the centre of high pressure, the area of low temperature also advanced. On the 23rd its centre covered Gujarat, Khandesh and the West Satpuras. By the 24th it had moved east to the head of the Peninsula. On the 25th it covered the East Satpuras and outlying areas of low temperature shewed over Central Bengal. On the 26th the centre lay over Chota Nagpur and on the 27th it covered South-West Bengal, low temperature shewing as far east as Burma, and on the 28th its centre lay apparently over the head of the Bay. By the 28th, however, it had diminished very considerably in intensity, the greatest defect being only about 8° or 9°, whereas during the most of its previous course the defect at the centre of the area of low temperature had remained steadily about 12°.

With the transfer eastwards over the head of Peninsula of the area of low temperature during the last five days of the month, the temperature rose slowly but steadily on the west of the Peninsula, but by the end of the month the mean temperature there was only from 2° to 4° in excess of normal.

The above discussion seems to establish that the very abnormal temperature conditions prevailing over India during the greater part of the month of February were directly related to the following abnormal features:—

(1) The tracks of several of the storms of the month were much more southerly than usual.

(2) The prevalence of marked anti-cyclonic conditions over Rajputana throughout a large part of the month.

(3) The consequent abnormal prevalence of cool dry winds over the regions lying to the south of that area, especially Gujarat and Khandesh.

(4) The development of a depression over Madras, while pressure remained high in North India, a distribution which led to an unusual extension of cool northerly winds over the Peninsula.

II.—The hot weather period.—A series of five cold weather depressions passed over North India during March, but they were with one exception—the storm of the 3rd to the 9th of small importance.

Temperature was lower than usual in the Central Provinces and in Bengal during the first six days of the month, the defect being greatest on the 3rd, when defects exceeding 12° were reported from the east of the Central Provinces. This low temperature was probably in part due to the rainfall in that area accompanying the first storm of the month, which passed over the head of the Peninsula during the first three days of the month, but was, in part, probably also a consequence of the unusually low temperatures in the Central Provinces and Bengal, resulting from the advance of the cold wave at the end of the previous period.

The advance of the second storm of the month over North India during the second-half of the first week was preceded by a warm wave, which by the 7th had raised the temperature in North-East India to about normal. The succeeding cold wave had spread over the whole of North India by the 8th, causing an especially rapid fall of temperature in the Hill and Sub-montane areas adjacent to the central parts of the Gangetic plain. On the following days, the cold wave passed slowly eastwards, and by the 12th had diminished considerably in intensity. It did not, however, pass into Burma. From the 12th to the 17th the weather was more settled and temperature rose steadily in the west of India and in the Punjab, but remained more or less considerably below normal in North-East India and along the East Coast, where dry cool westerly winds were, in consequence of the persistence of anti-cyclonic conditions over the central parts of the country, holding with unusual steadiness. From the 18th the weather again became disturbed and temperature rose rapidly as these conditions spread eastwards over the country. By the 20th the warm wave had spread into North-East India and the low temperatures which had prevailed in that area from about the 25th of February practically disappeared. On this day the temperature was in excess over nearly the whole of India, the excess being greatest in the North-West Punjab, where it exceeded 8°, and being about normal only along the coast areas and in Burma. The light to moderate showers, however, which were received in Baluchistan and the West Punjab on the 23rd, caused a very rapid fall of temperature in these areas and in Sind on that date. At Dera Ismail Khan the maximum temperature on the 23rd was 21° below normal, and both day and night temperatures fell considerably below normal in Lower Sind and Cutch. During the next six days the cold wave moved steadily eastwards reaching Bengal on the 28th or 29th, and thereafter slowly diminishing in intensity had practically disappeared by the 30th or 31st.

Meanwhile the warm wave preceding the last storm of the month was advancing across North India and on the 31st was giving mean temperatures more than 8° above normal in Rajputana.

On the 1st of April a feeble low temperature wave was appearing in the north-west of the Punjab, but it produced little effect on the temperature which remained till the 5th or 6th generally excessive over the west of the country and generally deficient over the east. Snow fell in the North-West Frontier on the 6th and 7th and showers in the Deccan and central parts of the country and in Assam. Consequently temperature fell below normal in these areas.

These three cool centres afterwards coalesced and on the 8th and following days a large area of low temperature shewed over the central parts of the country. The deficiency, however, at no time much exceeded 4°. By the 11th or 12th this area of low temperature had practically disappeared.

Temperature rose on the 11th in the Western Desert, as another disturbance approached from the west. But the rainfall in these areas and in the North-West Himalayas, which accompanied the disturbance, reduced the temperature considerably.

On the 13th pressure gave way very rapidly in Further Kashmir and heavy weather with snowstorms was reported from that area on the 13th and 14th. The very rapid fall of temperature which followed extended over the greater part of the Punjab and the United Provinces. Temperature again fell very rapidly in the extreme north of India on the 17th in consequence of disturbed weather with snow storms in the mountain ranges to the north. On this date mean temperatures in the extreme north of India were over 14° in defect. During the succeeding days the cool wave spread eastward over the country and by the 19th had reached Deltaic Bengal. A fresh fall of temperature occurred on the 20th in the extreme north of India as another depression in that area gave snow to the higher ranges to the north and in Further Kashmir. Extremely low temperatures, relatively to normal, subsequently extended eastwards, reaching Burma on the 23rd. By the 24th, temperature was in considerable to large defect over the whole of Extra-tropical India, the greatest deficiencies being shown in Upper Burma and in the Upper Sub-Himalayas, in both of which areas the mean temperatures were 10° below normal. A gradual rise of temperature followed and by the 27th temperature was only in slight defect in Upper and North-East India and was in considerable excess in Cutch. On the 25th the first indications of the formation of a low pressure area shewed off the Malabar Coast and weather became slightly disturbed in the south of the Peninsula. During the next three days, as it moved up the Arabian Sea, disturbed conditions extended over the greater part of the Peninsula and by the 29th the accompanying precipitation had reduced temperature very largely below normal over the greater part of the Peninsula. The greatest defect from normal was shewn in Berar on the 29th and over the East Satpuras on the 30th, the mean temperature in each area being over 12° below normal.

During the first three days of May temperature remained in moderate to large defect in the centre and east of the Peninsula, but was in large excess in North-West India, the excesses in the mean temperature ranging from 9° to 12°. On the 4th a storm of considerable intensity passed from the Arabian Sea over the Mekran Coast into Baluchistan and during the succeeding days passed in a north-easterly direction over the Punjab to the North-West Himalayas, giving heavy rain in its track and snow in the higher ranges. It was followed by a cold wave of unusual intensity which reduced mean temperatures over 16° below normal in Upper Sind on the 5th and over 18° below normal in the north of the Punjab on the 6th and 7th. The reduction of temperature was, as is usual during heavy rainfall in the hot weather, most marked in the maximum or day temperatures. The following gives data for the more

remarkable variations of the day temperature from normla during this period :—

Date.	Station.	Maximum temperature of date. Actual.	Normal.	Variation of actual from normal.
		°	°	°
5th May	Chaman	63·3	93·5	—30·2?
	Jacobabad	81·4	108·9	—27·5
	Hyderabad	85·1	106·4	—21·3
	Quetta	58·7	80·0	—21·3
6th „	Montgomery	77·2	104·4	—27·2
	Rawalpindi	70·0	96·3	—26·3
	Peshawar	70·2	96·0	—25·8
	Sialkot	77·5	101·8	—24·3
	Murree	53·2	75·4	—22·2
	Srinagar	57·9	79·0	—21·1
	Ludhiana	82·6	102·6	—20·0
7th „	Montgomery	84·0	109·0	—25·0
	Khushab	79·7	104·2	—24·5
	Rawalpindi	73·0	96·4	—23·4
	Sialkot	81·5	101·9	—20·4
	Peshawar	76·1	96·1	—20·0

From the 8th onwards temperature rose steadily and by the 11th was practically normal over North-Western India and in considerable to large excess over North-East India, where day temperatures as much as 13° above normal were reported on the 11th.

Fine weather obtained generally in North-Western India from the 9th to the 14th, but from the 15th to the 17th the weather again became disturbed in that area and fairly general rain was received at Indian stations and snow in Kashmir on the 17th. On this date temperature fell rapidly in the extreme north of India, but the fall did not extend beyond the Punjab and during the succeeding days the abnormally low temperatures gradually passed away. From the 20th to the 22nd conditions were again disturbed in the North Punjab and Kashmir and temperature again fell more or less considerably below normal. As at the same time heavy thundershowers caused a considerable reduction of temperature in Bengal and Assam, temperature was on the 23rd from 2° to 9° below normal in a belt of country stretching from the West Punjab along the Gangetic Plain to East Bengal.

A feeble depression, which formed in the east of the Bay between the 21st and 23rd and thereafter drifted northward and crossed the Arakan Coast near Akyab on the 25th, gave general and moderately heavy rain to Burma and reduced temperatures in that area from moderate excess on the 22nd to moderate defect on the 25th. During the remainder of the month the temperature variations were irregular and mainly determined by the incidence of thundershowers. Temperature was, however, generally excessive in Western India, due chiefly to excessive day temperatures.

The following summarizes the more important temperature conditions of the period.

(1) Day temperatures were in moderate to considerable excess throughout the period in Sind, Rajputana, and to a less extent in Gujarat. They were also in excess in Bengal and Assam, the excess in that area being most marked in March. The following gives data:—

Area.	Variation of mean maximum temperature from normal in March.	April.	May.	Hot weather period, March to May.
	°	°	°	°
Sind	+3·7	+1·9	+1·6	+2·4
Rajputana	+1·4	—0·1	+1·8	+1·0
Gujarat	+2·2	+0·9	—0·4	+0·9
Bengal	+1·6	+1·8	+1·9	+1·8
Assam	+2·9	+0·7	+1·7	+1·8

Day temperatures were in general defect on the mean of the period in the Punjab, the Central parts of the Gangetic Plain, the Central Provinces and the greater part of the Peninsula. The following gives data:—

Area.	Variation of mean maximum temperature from normal in March.	April.	May.	Hot weather period, March to May.
	°	°	°	°
Punjab	+0·5	—3·3	—1·0	—1·3
United Provinces of Agra and Oudh.	—2·0	—1·5	+1·1	—0·8
Central Provinces	—3·6	—2·2	+0·4	—1·8
Madras Deccan	—2·0	+0·2	—1·6	—1·1
Mysore	—0·3	+1·3	—0·5	+0·2
South India	—2·1	—1·1	—0·3	—1·2

In other areas the day temperatures did not differ much from normal.

(2) The night temperatures were in general defect throughout the period in the Gangetic Plain and in the Punjab, except during March, when they were in moderate to considerable excess in that area. They were normal or in slight excess throughout the period in the west of the Peninsula. Night temperatures were in moderate defect in North-East India in March and normal or in slight defect in that area in April and May. In Burma night temperatures were generally excessive, especially in Lower Burma

during the period. The only variations from normal which exceeded 4° during the period were the following. The monthly mean minimum temperature exceeded normal by 4° in March only in the Central Punjab, in April in no area and in May in Rajputana, and was less than normal by 4° only in April and then only in Baluchistan and at the foot of the Simla and Mussoorree hills. The following gives data :—

Month.	Station.	Variation from normal of minimum temperature.
		°
March	Chaman	+5·1
	Khushab	+4·1
April	Chaman	−5·6
	Quetta	−5·0
	Umballa	−4·6
	Roorkee	−4·6
May	Ajmer	+4·5

(3) The mean temperature was generally excessive in Rajputana and the South-West Punjab on the mean of the period, and was in moderate defect in the Indo-Gangetic Plain and generally normal elsewhere. Excesses of 4° or over shewed in the mean temperature only in the Central Punjab in March and a similarly large defect only in Baluchistan and the Indo-Gangetic Plain West in April. The following gives data for these areas :—

Month.	Station.	Variation from normal of mean temperature.
		°
March	Khushab	+4·4
	Chaman	+5·4
	Srinagar	+4·0
April	Chaman	−5·2
	Umballa	−4·8
	Roorkee	−4·4
	Rawalpindi	−4·3
	Montgomery	−4·3
	Murree	−4·2
	Leh	−4·1
May	Umballa	−5·3
	Rawalpindi	−4·8

The following gives data for the chief periods of excessive temperature, with the more important high temperatures, during the month of May and till the advance of the monsoon in June.

(1) *The 28th May to the 1st June.*—The following table gives variation data of the mean daily temperature for this period in North-Western India, Berar and the Central Provinces :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	28th May.	29th May.	30th May.	31st May.	1st June.
	°	°	°	°	°
United Provinces of Agra and Oudh.	+4·1	+2·4	−2·2	+0·5	−3·2
Punjab	+3·4	+3·5	+4·4	+3·0	+2·1
Sind	+1·3	+2·1	+4·8	+3·9	+3·8
Rajputana	+5·8	+5·3	+5·6	+6·4	+5·5
Gujarat	+1·6	+1·1	+2·0	+0·6	+0·6
Central India	+3·7	+5·9	+3·2	+5·1	+3·3
Central Provinces	+3·9	+6·2	+5·2	+1·9	+3·8
Berar	+4·9	+8·1	+9·9	+5·3	+6·1

The highest maximum temperatures registered at the hottest stations in that area were as follows :—

Date.	Station.	Maximum temperature.	Variation from normal.
		°	°
28th May	Ranchi	106·3	+11·9
	Lucknow	113·8	+10·2
	Ajmer	111·9	+7·5
29th „	Khandwa	116·7	+11·2
	Akola	116·0	+10·1
	Lahore	113·6	+7·6
30th „	Khandwa	117·2	+12·2
	Akola	116·4	+11·1
	Mooltan	117·5	+10·2
31st „	Mooltan	118·9	+11·4
	Khandwa	116·2	+11·4
	Akola	115·5	+10·5
1st June	Mooltan	118·0	+10·5
	Jacobabad	124·0	+10·4
	Akola	113·5	+9·1

(2) *The 9th to the 13th June.*—During this period temperature was in very considerable excess over the head of

the Peninsula and in the Gangetic Plain. The following gives variation data for these areas from the 9th to the 13th :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	9th June.	10th June.	11th June.	12th June.	13th June.
	°	°	°	°	°
United Provinces of Agra and Oudh.	+1·9	+2·9	+5·4	+10·1	+10·0
Bihar . . .	+5·7	+5·7	+5·7	+ 8·1	+ 3·4
Central Provinces . .	+6·9	+8·7	+8·6	+ 4·9	+ 3·4
Orissa . . .	+2·5	+4·8	+7·6	+ 8·9	+ 7·5
Gujarat . . .	+4·6	+8·7	+4·2	+ 1·7	+ 1·2

In this period the highest temperatures of the year were generally recorded. The following gives data :—

Station.	Highest maximum temperature recorded in June, 1901.	Date on which recorded.	Highest maximum temperature recorded in June previous to 1901.	Year in which recorded.
	°		°	
Balasore . . .	112·5	12th June	113·0	1888
Cuttack . . .	111·5	„ „	116·0	1872
Raniganj . . .	113·8	„ „	112·5	1888
Gaya	115·3	„ „	116·2	1878
Hazaribagh . . .	108·1	„ „	109·5	1889
Cawnpore . . .	117·1	11th „	114·1	1897
Lucknow . . .	118·8	12th „	118·0	1873
Allahabad . . .	118·2	„ „	119·8	1878
Benares . . .	117·3	„ „	119·0	1869
Bahraich . . .	114·2	13th „	111·6	1897
Dehra Dun . . .	107·5	„ „	108·3	1890
Ahmedabad . . .	115·4	10th „	116·9	1897
Surat . . .	114·0	„ „	109·2	1885
Nowgong . .	115·0	11th „	117·2	1878

(3) *The 19th to the 25th June.*—On the 13th an advance of the monsoon current reduced temperature very considerably over a large part of India and rain continued to fall fairly generally till the 19th, when the moist current retreated. The temperature immediately rose and by the 21st was in very large excess over the central parts of the country. Although between the 22nd and 26th light showers fell in the North-West Himalayas and some snow in Kashmir, the cooling effects of the precipitation did not extend beyond the Punjab, and temperature still continued very high in the Gangetic Plain and over the head of the Peninsula. The following gives data for the region of greatest excess of temperature during this period :—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of						
	19th June.	20th June.	21st June.	22nd June.	23rd June.	24th June.	25th June.
United Provinces of Agra and Oudh.	+6·5	+8·1	+8·2	+7·4	+7·0	+7·2	+6·1
Punjab . .	+6·3	+7·7	+7·4	+6·2	+2·9	+1·3	—0·9
Orissa . .	+3·9	+4·8	+7·4	+7·5	+3·4	+5·5	+6·1
Rajputana .	+7·0	+6·5	+5·3	+4·1	+4·2	+5·3	+5·6
Central Provinces.	+5·8	+4·6	+4·8	+7·1	+6·8	+4·5	+3·4
Central India.	+8·4	+8·7	+8·0	+7·8	+7·5	+6·7	+6·6
Chota Nagpur	+6·6	+6·1	+8·2	+7·0	+7·6	+6·3	+7·1

The following gives data for the highest maximum temperatures recorded on each day of the period :—

Station.	Date.	Maximum temperature.	Variation from normal.
Mooltan	19th June	118·0	+11·8
Sialkot	20th „	118·5	+13·4
Sialkot	21st „	119·0	+14·4
Lahore	22nd „	114·6	+11·0
Cawnpore	23rd „	112·6	+14·2
Allahabad	24th „	113·7	+15·6
Jhansi	25th „	111·3	+12·3

As the disturbance in the Punjab passed away, temperature again rose very high, and from the 27th to the end of the month was in considerable to very large excess over the greater part of the Gangetic Plain and the central parts of the country, as shewn in the following discussion.

(4) *The 27th June to the 6th July.*—The excessive temperatures were chiefly due to the delay in the establishment of monsoon over the interior of the country, the actual temperatures recorded being in no way remarkable. The following gives variation data for every alternate day during the period :—

Area.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of				
	27th June.	29th June.	1st July.	3rd July.	5th July.
Bihar . . .	+1·7	+ 3·8	+ 5·4	+ 4·7	+ 3·8
Chota Nagpur . .	+4·1	+ 5·9	+ 8·2	+ 2·5	+ 6·8
United Provinces of Agra and Oudh.	+7·1	+10·2	+12·1	+ 9·9	+10·9
Punjab . . .	—0·2	+ 6·1	+ 4·8	+ 5·7	+ 7·9
Rajputana . . .	+2·7	+ 6·7	+ 6·2	+10·0	+13·9
Central India . .	+4·7	+ 7·0	+ 7·7	+ 9·5	+10·8
Central Provinces .	+6·3	+ 2·4	+ 3·3	+ 3·7	+ 5·0

The following gives data for the highest maxima recorded on each day of the period :—

Station.	Date.	Maximum temperature.	Variation from normal.
		°	°
Cawnpore . . .	27th June . .	110·5	+15·5
Cawnpore . . .	28th „ . . .	112·0	+17·8
Cawnpore . . .	29th „ . . .	113·6	+19·8
Allahabad . . .	30th „ . . .	113·7	+18·9
Allahabad . . .	1st July . . .	114·2	+20·2
Roorkee	2nd „ . . .	112·2	+18·8
Jhansi	3rd „ . . .	111·3	+17·5
Jaipur	4th „ . . .	113·2	+18·2
Jaipur	5th „ . . .	116·2	+22·2
Jhansi	6th „ . . .	113·4	+22·0

As is usual during breaks in the rains or a delay in the advance of the monsoon current, the excesses were in general greatest in the day temperatures. The following gives data for the more remarkable variations on each day from 1st to 6th July :—

Date.	Station.	Variation from normal of		
		Maximum temperature of date.	Minimum temperature of date.	Mean temperature of date.
		°	°	°
1st July .	Allahabad . .	+20·2	+12·4	+16·3
	Lucknow . .	+19·5	+ 9·4	+14·5
2nd „ .	Roorkee . .	+18·8	+ 9·0	+13·9
	Jhansi . . .	+17·1	+10·6	+13·9
3rd „ .	Jhansi . . .	+17·5	+12·6	+15·1
	Agra . . .	+14·5	+ 9·8	+12·2
4th „ .	Ajmer . . .	+16·8	+10·1	+13·5
	Jhansi . . .	+13·6	+13·1	+13·4
5th „ .	Jhansi . . .	+19·7	+16·5	+18·1
	Jaipur . . .	+22·2	+13·3	+17·8
6th „ .	Jhansi . . .	+22·0	+13·6	+17·8
	Jaipur . . .	+18·9	+10·0	+14·5

On the 7th the winds strengthened on the West Coast and the rainfall extended rapidly northward and thence into the interior, and as at the same time an advance occurred from the Bay area, temperature fell rapidly over the whole country. By this time the monsoon may be considered to have been completely established over the country, hence further consideration of the temperature variations in July will more fitly find place in the discussion of the temperature conditions of the south-west monsoon period.

III.—The south-west monsoon period.—The temperature variations during this period chiefly depend on the amount and distribution of the rainfall. During the monsoon period of 1901 these variations were unusually large in June and July owing to prolonged delay in the establishment of the monsoon over India. The rains began on the West Coast towards the end of the second week of June, or considerably later than usual, and were feeble and intermittent during the remainder of June and during the first half of July. The Arabian Sea current was of about normal strength during the last ten days of July and in August, but was feeble in September and withdrew from Upper India considerably earlier than usual. The Bay current was throughout the first-half of the period slightly weaker and more unsteady than usual and was mainly determined to Burma and North-East India. It was of normal strength in August and gave good rain to Northern India, but was feeble in September. The rains commenced late in the United Provinces and the Punjab, but during the latter half of July and in August were on the whole favourably distributed. They terminated unsually early in September, especially in the western districts. The rainfall of the period was abundant in the West Coast districts south of Bombay, but was deficient over the remainder of the area usually dominated by the Arabian Sea current. The deficiency was large in Khandesh, Rajputana, Gujarat, Kathiawar, Cutch and Lower Sind, moderate in the Central Provinces and slight to moderate in the interior of the Peninsula. The rainfall of the period was favourable over the greater part of North-East India and in Burma.

1. During the first-half of the period temperature was excessive over the greater part of the interior of the country, the excess being most marked in June over the central parts of the United Provinces, where it was more than 6°, and, in July, over Rajputana and Central India, where it ranged from 5° to 6°. As usually happens during hot periods in the monsoon season, the excess was much more marked in the maxima than in the minima temperatures.

The following table gives data in illustration :—

Area.	Mean daily temperature.		
	Actual, June, 1901.	Normal, June.	Variation from normal.
	°	°	°
Orissa	89·1	85·5	+3·6
Chota Nagpur	91·1	86·2	+4·9
United Provinces of Agra and Oudh .	94·4	90·3	+4·1
Rajputana	96·2	91·7	+4·5
Gujarat	91·9	88·7	+3·2
Central India	93·7	88·7	+5·0
Central Provinces	92·3	87·8	+4·5
Berar	90·9	86·9	+4·0

The area of greatest excess hence included the Gangetic Plain and Chota Nagpur, East Rajputana, Central India, Gujarat and the Deccan.

The following table gives variation data for the stations in these areas where the excess in the mean temperature was most marked:—

Station.	Variation of mean temperature from normal in		
	June.	July.	Period, June and July.
	°	°	°
Balasore	+5·2	+1·3	+3·3
Hazaribagh	+5·8	+2·4	+4·1
Cawnpore	+6·8	+3·9	+5·4
Jhansi	+6·3	+5·9	+6·1
Jaipur	+5·1	+6·0	+5·6
Bikaner	+5·2	+5·0	+5·1
Ahmedabad	+4·7	+4·1	+4·4
Sutna	+7·0	+5·3	+6·2
Hoshangabad	+5·5	+4·2	+4·9
Deesa	+3·2	+5·4	+4·3
Amraoti	+4·6	+1·4	+3·0

Over the remainder of the country the mean temperature was either normal, or in only slight excess. The following gives data for the areas of least excess:—

Area.	Variation of mean temperature from normal in		
	June.	July.	Period, June and July.
	°	°	°
Burma	+0·9	+0·5	+0·8
Assam	—0·6	+0·1	—0·3
Bengal	+0·3	+0·9	+0·6
Orissa	+3·6	+1·0	+2·3
West Coast	+0·3	+1·0	+0·7
Mysore	+0·5	+0·4	+0·5
South India	+0·5	+0·9	+0·7

2. During the second-half of the period the chief features of the temperature variations were the following:—

(1) Temperature was in moderate excess in August over the North-West Frontier and Indus Valley and North-West Rajputana and in September over East Rajputana, Central India, Gujarat and the Deccan. The following gives data in illustration:—

Area.	Variation from normal of mean temperature in		
	August.	September.	Period, August and September.
	°	°	°
North-West Frontier, Indus Valley and North-West Rajputana.	+2·2	—0·1	+1·1
East Rajputana, Central India and Gujarat.	+0·5	+2·1	+1·3
Deccan	—0·6	+1·7	+0·6

(2) Temperatures were normal or in only slight excess or defect in Burma, Assam, Bengal Orissa, Chota Nagpur and the Gangetic Plain. The following gives data in illustration:—

Area.	Variation of mean temperature from normal in		
	August.	September.	Period, August and September.
	°	°	°
Burma	0	+1·1	+0·6
Assam	+0·4	—0·3	+0·1
Bengal	+1·0	+0·4	+0·7
Orissa	+0·4	+0·8	+0·6
Bihar	+0·4	+0·2	+0·3
Chota Nagpur	+0·7	0	+0·4
United Provinces of Agra and Oudh.	+0·3	0	+0·2

IV.—The retreating south-west monsoon period.—At the commencement of the period temperature was more or less excessive everywhere, except in the extreme south of the Peninsula, where during the first week of October the weather was showery. A storm from the Bay passed over South and East Bengal at the end of the first week and the accompanying rainfall reduced the temperature more or less considerably below normal in Burma and Bengal. In North-Western and

Central India temperatures were in moderate to considerable excess from the 6th to the 13th. The following gives data for the region of greatest excess:—

Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of							
	6th October.	7th October.	8th October.	9th October.	10th October.	11th October.	12th October.	13th October.
	°	°	°	°	°	°	°	°
Khandwa .	+7·6	+7·9	+8·9	+6·6	+4·8	+4·6	+6·4	+7·1
Ahmednagar .	+7·3	+5·8	+3·4	+5·7	+3·6	+3·9	+3·0	+3·1
Ajmer . .	+7·0	+4·2	+7·2	+7·1?	+2·7	+1·5	+4·3	+5·7
Neemuch .	+6·0	+5·6	+5·8	+2·8	+2·6	+3·2	+3·3	+3·7
Malegaon .	+6·5	+5·5	+5·1	+4·3	+4·9	+4·2	+5·1	+4·8
Sholapur .	+3·4	+5·1	+3·6	+3·1	+3·5	+2·4	+4·6	+2·8
Bijapur .	+4·8	+5·1	+4·6	+4·7	+3·9	+3·8	+4·8	+4·2?

On the 14th, a depression, which had been developing in the Bay during the previous three days, crossed the East Coast near Waltair and during the next four days marched across the head of the Peninsula to Gujarat thereafter passing out into the Arabian Sea. It gave heavy rain in the Madras coast districts and moderate to light rain in the interior. The rainfall in the Peninsula was chiefly confined to the track of the storm and reduced the temperature only in these areas. With the disappearance of this storm fine weather set in over the greater part of the Indian region. Temperature rose and continued in considerable to large excess over almost the whole country till the end of the month. The following gives data for alternate days during the period for the area of greatest and most persistent excess of temperature:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of						
	19th October.	21st October.	23rd October.	25th October.	27th October.	29th October.	31st October.
	°	°	°	°	°	°	°
Rajputana	+3·9	+8·2	+4·3	+5·5	+5·5	+6·6	+7·7
Central India . . .	+4·6	+5·4	+5·1	+2·6	+3·8	+4·8	+7·2
Central Provinces . .	+4·8	+5·4	+4·9	+1·4	+2·5	+3·5	+4·2
Berar	+4·4	+5·5	+6·8	+2·1	+2·6	+3·6	+3·1

The following gives the more important features of the temperature variations during October:—

(1) Higher day temperatures than usual over the greater part of Upper India, the head of the Peninsula and the Deccan.

(2) Excessive night temperatures over these areas, but less markedly so than the day temperatures.

(3) Slightly lower day, and slightly higher night, temperatures than usual over Burma and the West Coast, which, with Assam and the East Coast North, were the only areas where the mean temperature of the month was in excess by less than one degree.

During the first-half of November, fine dry weather with high temperatures obtained over the whole of India except in the Peninsula to the south of Lat. 12° N., where the retreating monsoon was giving more or less rain daily. At the beginning of the month, temperature was in greatest excess along a broad belt extending from Sind to the central districts of Bengal. The following table shews the variations from normal of the mean temperature of the day in this area for alternate days:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of						
	1st November.	3rd November.	5th November.	7th November.	9th November.	11th November.	13th November.
	°	°	°	°	°	°	°
Bengal . .	+3·4	+3·4	+2·2	+1·6	+0·7	+1·4	+0·4
Orissa . .	+4·9	+1·6	+2·0	+4·4	—0·9	+0·8	+4·1
Bihar . .	+5·5	+3·4	+1·4	+1·9	+1·9	+1·9	+1·1
Chota Nagpur.	+5·2	+3·9	+3·1	+2·9	+1·8	+2·4	+2·1
United Provinces of Agra and Oudh.	+4·4	+2·5	+1·7	+1·9	+2·2	+1·6	+1·6
Punjab . .	+4·5	+2·4	+2·3	+2·3	+3·6	+3·4	+2·1
Sind . .	+3·1	+4·4	+2·9	+4·2	+3·9	+2·2	+1·5
Rajputana .	+6·7	+5·5	+5·9	+5·7	+4·9	+2·9	+1·7
Gujarat . .	+4·9	+5·8	+5·7	+3·4	+2·5	+1·9	+0·1
Central India .	+7·0	+4·8	+2·7	+2·1	+1·6	+1·0	+1·2
Central Provinces.	+4·2	+3·6	+1·5	+0·5	—0·4	+1·0	+1·3
Berar . .	+3·8	+3·1	+2.5	+0·6	—0·6	+0·2	+0·8

During the second half of the month, two cyclonic storms advanced from the Bay over the Indian land area. The first formed in the south-west of the Bay about the 10th or 11th and, thereafter advancing north-eastward parallel to the coast, passed into East Bengal and Upper Burma; the other formed in the centre of the Bay on the 22nd or 23rd and gave disturbed weather during the last week of the month in Burma, Bengal, Orissa and Ganjam. The rainfall accompanying the first of the two storms reduced temperature considerably over the East Coast, Bengal, Assam and Burma from the 13th to the 18th. Meanwhile in other divisions the weather was fine with

generally increasing temperature. The following gives data:—

Province or Division.	Variation from normal of mean temperature of 24 hours preceding 8 A. M. of				
	13th November.	15th November.	16th November.	17th November.	19th November.
	°	°	°	°	°
United Provinces of Agra and Oudh	+1·6	+1·9	+1·7	+2·0	+0·4
Punjab	+2·1	+2·4	+1·9	+1·0	+1·3
Sind	+1·5	+1·5	+2·4	+0·7	+1·7
Rajputana	+1·7	+3·2	+3·2	+2·9	+2·4
Gujarat	+0·1	+4·9	+5·0	+4·2	+4·9
Central India	+1·2	+3·6	+4·4	+4·7	+2·3
Central Provinces	+1·3	+4·0	+3·4	+3·5	+2·4
Berar	+0·8	+5·0	+5·2	+3·9	+4·7
West Coast	+0·8	+1·7	+1·2	+1·6	+3·6
Bombay Deccan	+0·1	+5·1	+7·3	+6·0	+4·8
Mysore	−0·2	+4·1	+5·2	+5·1	+3·4
Madras Deccan	−0·3	+5·0	+7·8	+6·7	+5·3
South India	−0·8	+3·1	+3·9	+2·3	+1·4

The following gives variation data for stations in the hottest area during the 15th, 16th and 17th:—

Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		
	15th November.	16th November.	17th November.
	°	°	°
Sholapur	+ 5·7	+ 10·4	+ 5·5 ?
Bellary	+ 5·5	+ 10·0	+ 7·5
Bijapur	+ 7·4	+ 9·0	+ 9·3
Kurnool	+ 6·6	+ 8·6	+ 9·1
Surat	+ 9·5 ?	+ 9·5	+ 8·3
Khandwa	+ 8·6	+ 6·5	+ 4·0

During the interval between the two storms, the weather was generally fine and quiet throughout the greater part of India.

The rainfall accompanying the second storm of the month not only produced a marked reduction of temperature in the area of rainfall, but caused a sensible fall over the greater part of North-Western, Central, and Western India. The following gives data to illustrate the low temperatures ruling in Bengal, Assam and Burma at this time:—

Station.	Variation from normal of mean temperature of 24 hours preceding 8 A.M. of		
	25th November.	26th November.	27th November.
	°	°	°
Minbu	− 2·5	− 3·8	− 0·8
Yamethin	− 4·5	− 4·8	− 0·5
Kindat	− 3·8	− 4·8	− 1·5
Silchar	− 4·2	− 5·5	− 1·0
Jalpaiguri	− 2·0	− 4·5	− 3·7
Dinajpur	− 2·0	− 3·0	− 3·7
Jessore	− 0·3	− 4·2	+ 0·9
Calcutta	+ 0·3	− 3·3	− 0·1
Burdwan	− 3·1	− 4·3	− 5·2

During the last two days of the month, the disturbed conditions disappeared, rainfall ceased and the temperature rose generally. On the 30th, temperature was excessive everywhere, except in Bengal and on the West Coast. The following gives data in illustration:—

Province or Division.	Variation from normal of		
	Mean Maximum temperature, 30th November.	Mean Minimum temperature, 30th November.	Mean daily temperature 30th November.
	°	°	°
Burma	+1·7	+2·2	+2·0
Assam	+0·1	+4·3	+2·2
Bengal	−0·6	−2·2	−1·4
Orissa	+0·3	+1·4	+0·9
Bihar	+2·9	−2·0	+0·5
Chota Nagpur	+2·6	+1·5	+2·1
United Provinces of Agra and Oudh	+4·5	+1·9	+3·2
Punjab	+5·5	+2·8	+4·2
Sind	+5·9	+2·7	+4·3
Rajputana	+9·0	+8·2	+8·6
Gujarat	+3·5	−1·1	+1·2
Central India	+6·7	+1·8	+4·3
Central Provinces	+4·0	−0·3	+1·9
Berar	+2·7	−1·3	+0·7
West Coast	−1·6	+1·3	−0·2
Bombay Deccan	+2·1	+6·0	+4·1
Mysore	−0·1	+4·7	+2·3
Madras Coast	−0·4	+4·0	+1·8
Madras Deccan	−3·0	+9·0	+3·0
South India	+1·9	+1·6	+1·8

The mean temperature of the month was in moderate excess over the same areas as in October, the day tempera-

ratures being, as in October, in greater excess than the night temperatures.

The night temperatures were everywhere higher than usual, most markedly so in Burma, where the mean excess was 2°·2. As, however, the day temperatures were int hat area in moderate defect, the mean temperature over Burma was normal or in only slight excess.

The weather during December was, on the whole, finer than usual. The only feature of importance was a slight depression which formed in the south of the Bay on the 6th and three days afterwards crossed the South Coromandel Coast, giving very heavy rain to the coast districts. In Upper India weather was slightly disturbed from the 25th to the 27th, when a depression of the cold weather type gave slight rain and snow to the hills and rain to the sub-montane districts of Northern India.

Day temperatures were, on the mean of the month, in slight to moderate excess over the same areas as in the previous two months, but the excesses were less marked. They were in defect over Burma and Assam and normal in Bengal, Orissa and South India.

The night temperatures were in considerable excess in Gujarat and the Central India Plateau and normal or in slight to moderate excess elsewhere.

The chief features of the mean temperature conditions of the period were hence the following :—

(1) Temperature differed only slightly from normal, on the mean of the period, in North-Eastern India and Burma, in South India and the West Coast. The following gives data in illustration :—

Area.	Variation of mean temperature from normal in			
	October.	November.	December.	Period, October to December.
	°	°	°	°
Burma	+0·5	+1·0	−0·7	+0·3
Assam	+0·8	+0·1	−0·5	+0·1
Bengal	+1·5	+0·5	+0·2	+0·7
Orissa	+1·7	+0·4	+0·2	+0·8
Bihar	+3·1	+1·1	+0·8	+1·7
Chota Nagpur	+2·6	+1·3	+1·7	+1·9
West Coast	+0·3	+1·3	+1·0	+0·9
Mysore	+0·9	+0·8	−0·2	+0·5
Madras Coast	+1·0	+0·3	−0·5	+0·3
South India	+1·2	+0·1	−0·4	+0·3

(2) Temperature was in moderate to considerable, but decreasing, excess over the remainder of the country. The following gives data in illustration :—

Area.	Variation of mean temperature from normal in			
	October.	November.	December.	Period, October to December.
	°	°	°	°
United Provinces of Agra and Oudh.	+2·5	+2·3	+1·1	+2·0
Punjab	+3·1	+2·3	+1·2	+2·2
Sind	+1·8	+2·7	+1·5	+2·0
Rajputana	+5·0	+4·0	+3·4	+4·1
Gujarat	+1·9	+3·3	+3·3	+2·8
Central India	+4·0	+3·0	+2·7	+3·2
Central Provinces	+2·7	+1·6	+1·5	+1·9
Berar	+3·0	+1·5?	+1·8	+2·1?
Bombay Deccan	+2·8	+2·3	+2·5	+2·5
Madras Deccan	+2·3	+1·9	+1·0	+1·7

The following gives variation data for the stations at which the excess on the mean of the period was greatest :—

Station.	Variation from normal during period, October to December, of		
	Maximum temperature.	Minimum temperature.	Mean temperature.
	°	°	°
Jhansi	+3·3	+5·0	+4·2
Ajmer	+3·7	+5·9	+4·8
Jaipur	+2·9	+4·3	+3·6
Deesa	+4·5	+5·6	+5·1
Lahore	+4·0	+3·0	+3·5
Sialkot	+3·1	+3·6	+3·4
Khandwa	+6·8	+2·4	+4·6
Saugor	+3·4	+3·9	+3·7
Surat	+5·3	+3·9	+4·6
Ahmedabad	+4·1	+2·8	+3·5
Bijapur	+3·0	+3·2	+3·1

The year.—The following gives variation data for the mean temperature of Extra-Tropical and Tropical India

and also of the whole of India, month by month, during the year 1901 :—

Month.	Variation from normal of mean daily temperature in		
	Extra-Tropical India from Table II.	Tropical India from Table II.	Whole India from Table II.
	°	°	°
January	−2·3	+1·8	−0·3
February	−1·3	+0·4	−0·5
March	+0·3	+0·3	+0·3
April	−0·7	+0·6	−0·1
May	+0·4	+0·2	+0·3
June	+2·1	+1·3	+1·7
July	+1·2	+0·5	+0·9
August	+0·7	+0·1	+0·4
September	+0·2	+1·6	+0·9
October	+3·0	+1·3	+2·1
November	+1·6	+1·0	+1·3
December	+0·7	+0·4	+0·6
Whole year	+0·5	+0·8	+0·6

The most important feature of the mean temperature of the year was the slight excess showing in both Tropical and Extra-Tropical India. In the former area the excess shewed chiefly in January, June, September and October, but vanished at no period of the year ; in the latter area, the mean temperature was in moderate to large defect in the cold weather period and in similar excess during June and July and again in October and November, differing little from normal during the remainder of the year. The mean excess of the year was most marked in the Central India Plateau, the South-West Punjab and Gujarat; for stations in which areas mean variation data are given below :—

Station.	Variation from normal of		
	Maximum temperature.	Minimum temperature.	Mean temperature.
	°	°	°
Mooltan	+2·0	+1·9	+2·0
Deesa	+2·6	+2·0	+2·3
Ajmer	+1·5	+2·8	+2·2
Jaipur	+1·8	+2·2	+2·0
Sambhar	+2·6	+1·3	+2·0
Jhansi	+1·2	+2·8 ?	+2·0 ?
Surat	+2·3	+2·1 ?	+2·2 ?
Ahmedabad	+2·9	+1·1	+2·0

The mean temperature of the year was generally below normal at the hill stations in Upper India. The following gives variation data for the Himalayan stations :—

Station.	Variation from normal of		
	Maximum temperature.	Minimum temperature.	Mean temperature.
	°	°	°
Leh	−3·8	−1·8	−2·8
Srinagar	+1·0	+0·3	+0·7
Cherat	−0·3	+0·4	+0·1
Murree	−1·8	+0·2	−0·8
Simla	−0·9	−0·4	−0·7
Chakrata	−0·9	−0·1	−0·5
Ranikhet	+0·1	+0·5	+0·3
Darjeeling	+0·9	+0·9	+0·9

The following table gives the progressive variation of the mean actual temperature of the past 27 years :—

Year.	Number of stations.	Mean anomaly.	Progressive variation.
		°	°
1875	72	−0·29	
1876	72	−0·08	+0·21
1877	74	+0·17	+0·25
1878	74	+0·62	+0·45
1879	70	−0·13	−0·75
1880	106	−0·13	+0·26
1881	110	−0·01	−0·14
1882	113	−0·11	−0·10
1883	122	−0·48	−0·37
1884	122	−0·61	−0·13
1885	118	−0·29	+0·32
1886	122	+0·08	+0·37
1887	126	−0·23	−0·31
1888	127	+0·36	+0·59
1889	81	+0·86	+0·50
1890	85	+0·13	+0·73
1891	72	−0·03	−0·16
1892	74	+0·66	+0·69
1893	68	−1·33	−1·99
1894	66	+0·11	+1·44
1895	69	+0·35	+0·24
1896	67	+1·30	+0·95
1897	75	+0·90	−0·40
1898	75	+0·65	−0·25
1899	52	+0·78	+0·13
1900	50	+1·17	+0·39
1901	50	+0·63	−0·54

The above shows that the excessive temperatures which have prevailed since 1894 still continue, but to a less marked extent than in 1900.

Atmospheric Pressure.

Full information regarding the barometers in use at Indian observatories and of the methods of reducing the observations and obtaining the mean daily and monthly pressures will be found in the annual reports of previous years (*e.g.*, pages 58 and 59 of the report for 1890) and also in pages 8 and 9 of the monthly review for January, 1901.

In Table II of each monthly review the monthly mean daily pressure (corrected for temperature) is given in the fifth figure column and the variation from the normal in the sixth figure column. The normal monthly mean pressure values were recalculated for all first and second class stations in 1896, data up to 1896 being utilized, and will be found in Table VI of the Annual Summary for that year. The variation data in the monthly reviews for the year 1901 were obtained by a comparison of the actual monthly means with the corresponding normal, published in the Annual Summary for 1896, and the variations of the monthly pressures of all first and second class stations in 1901 are given in Table XIII (below). The figures in the fifth and sixth figure columns of Table II appended to the present Annual Summary, giving data of the mean pressure of the air and its variations from the normal for all first and second class stations, are comparable with the corresponding data of previous years published in the annual reports and summaries.

In the seventh figure column of Table II in each monthly review are given the mean pressures reduced to sea-level and corrected to constant gravity (Lat. 45°). These, it should be noted, are not comparable with the sea-level pressure values of the years 1875—90 as given in the annual reports for those years, for previous to 1891 no correction was made to reduce the monthly pressure means to standard gravity.

In Table I of each monthly review, and also in that appended to the Annual Summary, the pressure data are given for a fixed hour (*viz.*, 8 A.M. local time) of the day. The second figure column in those tables gives the mean 8 A.M. pressures for the month corrected for temperature. In the third figure column are given the variations of the mean 8 A.M. pressures from the normal mean 8 A.M. pressures.

Normal 8 A.M. mean monthly data for the great majority of stations will be found in the Annual Summary of 1894, Tables VII and VIII.

The mean pressure data for the year 1901 will be found under the headings "Pressure" in Tables I and II appended to the present Annual Summary:—

TABLE XIII.—*Comparison of monthly mean pressures in 1901 with the averages of past years.*

Meteorological Province.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
		"	"	"	"	"	"	"	"	"	"	"	"	"
Burma Coast and Bay Islands.	Port Blair	+·024	+·019	+·033	+·012	+·007	+·011	—·012	+·003	+·023	—·011	—·009	+·019	+·010
	Rangoon	—·009	+·010	+·027	+·018?	+·001	—·024	—·031	—·033	+·021	—·038	?	?	?
	Diamond Island	—·005	—·001	+·022	—·002	—·017	—·024	—·028	—·027	+·021	—·045	—·016	+·003	—·010
	Akyab	—·003	+·002	+·023	—·002	—·003	—·018	—·024	—·039	+·040	—·044	—·016	+·009	—·006
Bengal and Orissa	Chittagong	+·020	+·014	+·031	—·008	—·011	—·023	—·035	—·056	+·025	—·055	—·015	+·004	—·009
	Calcutta (Alipore)	+·034	+·045	+·058	—·006	+·020	—·013	—·011	—·049	+·044	—·041	—·024	+·015	+·006
	Saugor Island	+·027	+·034	+·061	+·003	+·023	—·010	—·016	—·045	+·054	—·040	—·027	+·015	+·007
	False Point	+·015	+·028	+·054	—·001	+·004	—·017	—·032	—·053	+·048	—·047	—·037	+·009	—·002
Gangetic Plain and Chota Nagpur.	Hazaribagh	+·019	+·040	+·060	+·002	+·002	—·016	—·014	—·050	+·056	—·029	—·016	+·011	+·005
	Darbhanga	+·023	+·025	+·064	—·011	0	—·025	—·011	—·040	+·039	—·060	—·020	+·007	0
	Allahabad	+·026	+·032	+·059	—·005	—·011	—·052	—·041	—·059	+·058	—·059	—·035	0	—·007
Upper Sub-Himalayas.	Dehra Dun	+·015	+·039	+·058	+·001	—·002	—·034	—·017	—·033	+·040	—·039	—·015	+·013	+·002
	Roorkee	+·026	+·046	+·073	+·016	+·012	—·031	—·006	—·025	+·045	—·039	—·015	+·014	+·009
	Meerut	+·016	+·032	+·058	—·002	—·003	—·045	—·023	—·041	+·036	—·048	—·034	+·005	—·004
	Lahore	+·019	+·034	+·058	+·019	+·017	—·016	—·007	—·050	+·046	—·043	—·024	+·012	+·005
	Ludhiana	+·027	+·045	+·067	+·025	+·019	—·022	—·003	—·036	+·044	—·035	—·008	+·022	+·012

TABLE XIII.—*Comparison of monthly mean pressures in 1901 with the averages of past years*—contd.

Meteorological Province.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
		"	"	"	"	"	"	"	"	"	"	"	"	"
North-West Frontier, Indus Valley and North-West Rajputana.	Peshawar	+·010	+·028	+·052	+·020	+·026	+·021	−·008	−064	+·041	−·049	−·033	+·008	+·004
	Jacobabad	+·014	+·038	+·035	+·008	−·011	−·010	−·014	−·057	+·051	−·044	−·019	+·011	0
	Kurrachee	+·021	+·053	+·034	−·012	+·017	+·004	+·011	−·028	+·065	−·032	−·021	+·010	+·010
East Rajputana, Central India and Gujarat.	Jaipur	+·022	+·031	+·054	+·004	+·009	−·001	−·006	−·022	+·068	−·033	−·010	+·016	+·011
	Deesa	+·021	+·028	+·026	−·023	+·014	+·006	−·007	−·026	+·058	−·035	−·028	+·005	+·003
Deccan	Belgaum	−·002	−·005	+·024	−·014	+·022	+·015	−·010	−·004	+·035	−·007	−·021	+·009	+·004
	Sholapur	−·013	−·007	+·030	−·013	+·016	+·007	−·014	−·014	+·042	−·024	−·026	+·012	0
	Poona	+·002	+·007	+·030	−·013	+·027	+·021	−·002	−·009	+·061	−·016	−·019	+·009	+·008
	Akola	+·013	+·018	+·059	+·006	+·015	+·017	−·004	−·012	+·076	−·023	−·012	+·026	+·015
	Buldana	+·007	+·002	+·041	−·003	+·013	+·018	−·009	−·019	+·059	−·018	−·012	+·019	+·009
	Khandwa	+·017	+·018	+·045	−·014	+·012	+·009	−·007	−·023	+·074	−·031	−·015	+·021	+·008
	Nagpur	+·018	+·026	+·072	+·016	+·020	+·022	−·002	−·019	+·080	−·023	−·010	+·033	+·019
	Hyderabad (Deccan)	−·004	−·005	+·061	+·008	+·019	+·028	−·006	−·005	+·054	−·022	−·039	+·001	+·009
West Coast	Bombay	+·014	+·027	+·025	−·023	+·024	+·023	0	−·010	+·067	+·002	−·032	+·012	+·012
	Karwar	+·032	+·024	+·028	?	?	?	?	?	?	?	−·014	+·024	?
South India	Salem	0	−·021	+·027	−·016	+·002	−·001	−·029	−·025	−·003	−·026	−·032	+·017	−·009
	Chitaldroog	+·010	−·013	+·040	−·010	+·001	+·024	−·017	+·001	+·031	−·010	−·041	−·001	+·001
	Bangalore	0	−·012	+·025	−·006	+·015	+·016	−·014	−·003	+·017	−·017	−·027	+·013	0
	Hassan	+·023	−·010	+·039	−·010	+·005	+·025	−·011	0	+·021	−·011	−·036	+·006	+·003
	Mysore	+·014	−·017	+·038	−·013	0	+·026	−·013	−·001	+·019	−·011	−·033	+·011	−·002
	Madras	+·001	−·013	+·041	+·004	+·010	+·014	−·020	−·011	+·022	−·022	−·037	+·023	+·001
	Bellary	−·010	−·006	+·037	−·013	+·020	+·012	−·019	−·008	+·027	−·029	−·028	+·012	0
Hill Station, Baluchistan.	Quetta	−·012	+·022	+·073	+·018	+·019	+·045	+·014	−·019	+·043	+·008	+·015	+·029	+·021
Hill Stations, Northern India.	Leh	−·031	+·050	+·085	−·026	−·004	+·017	+·038	+·004	+·019	+·027	+·041	+·023	+·020
	Srinagar	−·008	+·010	+·066	+·013	−·007	+·047	+·015	−·028	+·046	−·021	−·017	−·009	+·009
	Simla (Ridge)	−·023	+·014	+·065	+·014	+·022	+·015	+·012	−·001	+·046	+·013	+·023	+·026	+·019
	Chakrata	−·026	+·021	+·043	−·009	+·011	+·004	+·012	−·017	+·026	−·006	−·027	+·007	+·003
	Ranikhet	−·002	+·041	+·060	+·003	+·015	−·007	−·006	−·019	+·040	+·001	+·007	+·026	+·013
	Darjeeling	−·007	+·035	+·058	−·003	+·030	−·013	−·005	−·029	+·008	−·021	−·003	−·002	+·004
Hill Stations, Central India.	Mount Abu	−·031	−·030	+·024	−·035	+·001	+·004	−·020	−·036	+·051	−·034	−·021	+·007	−·010
	Pachmarhi	+·002	+·003	+·048	−·003	+·012	+·026	−·006	−·036	+·073	−·014	−·005	+·021	+·010
	Chikalda	−·014	−·014	+·038	−·005	+·019	+·017	−·022	−·042	+·062	−·027	−·020	+·009	•

TABLE XIII.—*Comparison of monthly mean pressures in 1901 with the averages of past years*—concld.

Meteorological Province.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November.	December.	Year.
		"	"	"	"	"	"	"	"	"	"	"	"	"
Hill Station, Southern India.	Wellington .	+·030	+·005	+·029	−·007	+·012	+·019	−·008	+·004	+·028	+·004	−·012	+·013	+·010
Extra Indian Stations.	Aden . .	+·003	+·059	+·021	−·017	−·013	+·058	+·002	−·012	+·040	−·004	−·004	+·012	+·012
	Perim . .	+·032	+·071	+·044	+·010	−·004	+·048	−·013	−·022	+·036	+·013	−·004	+·026	+·020
	Zanzibar . .	+·037	+·018	+·016	−·007	−·009	+·036	−·006	+·010	+·045	+·035	+·010	+·008	+·016
	Port Victoria (Seychelles).	+·026	+·012	+·017	−·060	−·018	+·037	−·024	+·005	+·040	+·014	+·005	+·011	+·005
	Mauritius .	+·019	+·046	−·036	−·033	−·012	−·009	−·004	−·001	+·022	+·009	+·015	+·008	+·002

The following tables give summaries of the pressure variation data according to the two groups of divisions employed in the corresponding tables of temperature variation data, that is, for the sixteen divisions for which the variation data were given in the "Geographical Summaries" in the annual reports previous to 1891 and the eleven meteorological provinces in Table I of each monthly review :—

TABLE XIV.—*Geographical summary of the pressure variation data of Table II in the monthly weather reviews of 1901.*

Meteorological Province.	Number of stations.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
		"	"	"	"	"	"	"	"	"	"	"	"	"
North-West Himalaya .	5	−·018	+·027	+·063	−·001	+·007	+·015	+·014	−·012	+·035	+·003	+·005	+·015	+·013
Sikkim Himalaya and Nepal.	1	−·007	+·035	+·058	−·003	+·030	−·013	−·005	−·029	+·008	−·021	−·003	−·002	+·004
Punjab Plains . .	3	+·019	+·036	+·059	+·021	+·021	−·006	−·006	−·050	+·044	−·042	−·022	+·014	+·007
Gangetic Plain . .	5	+·021	+·035	+·062	0	−·001	−·037	−·020	−·040	+·044	−·049	−·024	+·008	0
Western Rajputana .	4	+·006	+·022	+·030	−·016	+·005	+·001	−·008	−·037	+·056	−·036	−·022	+·008	+·001
Eastern Rajputana and Central India.	1	+·022	+·031	+·054	+·004	+·009	−·001	−·006	−·022	+·068	−·033	−·010	+·016	+·011
Nerbudda Valley .	1	+·017	+·018	+·045	−·014	+·012	+·009	−·007	−·028	+·074	−·031	−·015	+·021	+·008
Chota Nagpur . .	1	+·019	+·040	+·060	+·002	+·002	−·016	−·014	−·050	+·056	−·029	−·016	+·011	+·005
Lower Bengal . .	2	+·031	+·040	+·060	−·002	+·022	−·012	−·014	−·047	+·049	−·042	−·026	+·015	+·006
Orissa . . .	1	+·015	+·028	+·054	−·001	+·004	−·017	−·032	−·053	+·048	−·047	−·037	+·009	−·002
Central Provinces (South) and Berar.	5	+·005	+·007	+·052	+·002	+·016	+·020	−·009	−·026	+·072	−·021	−·012	+·022	+·011
Konkan . . .	1—2	+·023	+·026	+·027	−·023	+·024	+·023	0	−·010	+·067	+·002	−·023	+·018	+·013
Deccan, Hyderabad and Mysore.	9	+·002	−·008	+·036	−·009	+·014	+·019	−·012	−·005	+·034	−·014	−·030	+·008	+·003
Eastern Coast and Carnatic.	2	+·001	−·017	+·034	−·006	+·006	+·007	−·025	−·018	+·010	−·024	−·035	+·020	−·004
Arakan and Pegu .	3—4	+·001	+·006	+·026	+·002	−·008	−·022	−·030	−·014	+·027	−·046	−·016	+·005	−·006
Bay Islands . .	1	+·024	+·019	+·033	+·012	+·007	+·011	−·012	+·003	+·023	−·011	−·009	+·019	+·010
Extra-Tropical India .	24	+·009	+·031	+·055	−·001	+·009	−·008	−·007	−·035	+·046	−·031	−·016	+·011	+·005
Tropical India . .	23—24	+·006	+·001	+·036	−·004	+·010	+·011	−·015	−·012	+·040	−·020	−·022	+·013	+·004
Whole India . .	47—48	+·008	+·016	+·046	−·002	+·009	+·001	−·011	−·023	+·043	−·026	−·019	+·012	+·005

TABLE XV.—*Variations of the mean monthly pressure from the normal in 1901 in the eleven meteorological provinces of India.*

Meteorological Provinces.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December	Year.
	"	"	"	"	"	"	"	"	"	"	"	"	"
Burma Coast and Bay Islands.	—·004	+·007	+·016	—·014	—·007	—·012	—·026	—·030	+·033	—·028	0	+·019	—·004
Burma Inland . . .	+·028	+·025	+·054	+·018	+·006	—·013	—·017	—·022	+·052	—·026	—·001	+·015	+·010
Assam	+·006	+·019	+·052	—·003	+·002	—·024	—·010	—·025	+·035	—·036	+·004	+·016	+·003
Bengal and Orissa . .	+·019	+·027	+·053	—·006	+·013	—·014	—·018	—·046	+·032	—·037	—·011	+·019	+·003
Gangetic Plain and Chota Nagpur.	+·022	+·036	+·064	—·002	+·003	—·030	—·022	—·046	+·046	—·038	—·013	+·014	+·003
Upper Sub-Himalayas . .	+·016	+·044	+·063	+·007	+·009	—·031	—·014	—·040	+·037	—·039	—·006	+·023	+·006
North-West Frontier, Indus Valley and North-West Rajputana.	+·011	+·038	+·038	+·010	+·007	—·008	—·013	—·048	+·045	—·042	—·015	+·015	+·003
East Rajputana, Central India and Gujarat.	+·013	+·029	+·040	—·013	+·017	+·010	—·002	—·023	+·059	—·024	—·015	+·008	+·009
Deccan	+·008	+·011	+·050	—·004	+·016	+·017	—·010	—·024	+·066	—·019	—·004	+·025	+·011
West Coast	+·009	+·002	+·013	—·023	+·028	+·013	—·013	—·005	+·034	+·004	—·011	+·017	+·006
South India	+·005	—·002	+·038	—·002	+·017	+·020	—·014	—·005	+·032	—·016	—·020	+·023	+·006

I.—The cold weather period.—The mean pressure of the Indian area was in slight excess in January and in moderate excess in February. The excess was in January greatest in Burma (Inland), Bengal and Orissa, the Gangetic Plain and the neighbouring parts of the Central India Plateau, and in February, greatest and very considerable along the line of the Himalayas, from Gorakhpur to Peshawar, being absolutely greatest in the extreme north of the Punjab from Khushab to Rawalpindi. It was also in considerable excess in Kathiawar and Sind. In January, it exceeded ·020″ only in Upper Burma, the Indo-Gangetic Plain (East), in the extreme north of the Punjab, and locally at Sirsa, Kurrachee and Rajkot. In February it exceeded ·020″ over the whole Indian area, except Lower Burma and in the Peninsula south of Latitude 20° N.; it exceeded ·040″ in the Upper Sub-Himalayas and in Kathiawar and at Kurrachee, and exceeded ·060″ at Khushab and Rawalpindi.

In both January and February, the mean pressure was in slight defect in the centre and south of the Peninsula and in Lower Burma. Thus, over Extra-Tropical India, the mean pressure was in January ·009″, and in February ·031″, in excess, while in Tropical India the values were +·006″ and +·001″, respectively. Consequently for the whole Indian region the mean pressure variation was +·008″ and +·016″, or a mean variation of +·012,″ for the period.

The following gives the mean pressure anomalies in the various parts of India for the period:—

Area.	Pressure anomaly.		
	January.	February.	Period, January and February.
	"	"	"
Burma	—·004	—·007	—·006
Assam	—·006	—·001	—·004
Bengal	+·008	+·005	+·007
Orissa	+·006	+·013	+·010
Bihar	+·009	+·014	+·012
Chota Nagpur	—·002	+·016	+·007
United Provinces of Agra and Oudh . .	+·009	+·017	+·013
Punjab	+·004	+·022	+·013
Sind	+·001	+·023	+·012
Rajputana	+·004	+·001	+·003
Gujarat	0	+·017	+·009
Central India	+·002	+·003	+·003
Central Provinces	+·002	—·004	—·001
Berar	+·003	+·006	+·005
West Coast	—·002	—·018	—·010
Bombay Deccan	—·007	—·020	—·014
Mysore	—·004	—·019	—·012
Madras Coast	—·003	—·017	—·010
Madras Deccan	—·017	—·022	—·020
South India	—·008	—·037	—·023
Ceylon (Colombo)	0	—·034	—·017

In January, pressure wasin slight to moderate relative defect at the level of the hill stations, as compared with the neighbouring plains, and, in February, in very slight relative excess at some of the Upper India stations and slight to moderate relative defect at others, while in moderate relative excess in the Sikkim Himalayas and in moderate to large relative defect in other parts of India. The following gives data for ten pairs of stations :—

Hill and Plain Stations.	Vertical Pressure Anomaly		
	January.	February.	Period, January and February.
	"	"	"
Leh and Lahore	—·068	+·013	—·028
Murree and Peshawar	—·017	+·006	—·006
Simla and Ludhiana	—·053	—·033	—·043
Chakrata and Roorkee	—·042	—·025	—·034
Ranikhet and Bareilly	—·026	—·002	—·014
Darjeeling and Dhubri	—·008	+·033	+·013
Mount Abu and Deesa	—·040	—·041	—·041
Quetta and Jacobabad	—·024	+·001	—·012
Chikalda and Buldana	—·021	—·016	—·019
Wellington and Coimbatore	+·012	+·009	+·011

The following data for eleven meteorological provinces illustrate the local conditions in India in January and February :—

Meteorological Province.	Pressure Anomaly.		
	January.	February.	Period, January and February.
	"	"	"
Burma Coast and Bay Islands	—·015	—·013	—·014
„ Inland	+·017	+·005	+·011
Assam	—·005	—·001	—·003
Bengal and Orissa	+·008	+·007	+·008
Gangetic Plain and Chota Nagpur	+·011	+·016	+·014
Upper Sub-Himalayas	+·005	+·024	+·015
North-West Frontier, Indus Valley and North-West Rajputana.	0	+·018	+·009
East Rajputana, Central India and Gujarat	+·002	+·009	+·006
Deccan	—·003	—·009	—·006
West Coast	—·002	—·018	—·010
South India	—·006	—·022	—·014

II.—The Hot Weather Period.—In March the weather was more rainy and unsettled than usual over Northern and Central India, and in these areas the temperature was generally low. The rainfall of the month was relatively heavy over North-West India and parts of the Peninsula and unusually light over Burma Inland and in North-East India. In April, on the other hand, the weather was drier than usual over the greater part of the country, the usual hail and thunder storms in Assam and North-East India being less severe and less frequent than usual; at the same time the rainfall was in marked excess round the head of the Bay in Ganjam, Orissa, Deltaic and East Bengal. In May, the weather was more showery and disturbed than usual over the greater part of the interior of the Peninsula. As in March, the rainfall in Assam and North-East India was lighter than usual, and the storms both lighter and less frequent. About the middle of April, a disturbance of unusual character gave a heavy fall of snow in Chitral and the districts to the north, and showers in the North Punjab. This was followed by an intense cool wave which spread over the Punjab about the 14th, and gradually extended eastwards and southwards during the third week.

A cyclonic storm of somewhat unusual character formed about the 25th April near Lat. 6½° N. and Long. 73¾° E. and advancing first in a generally north-westerly direction towards the South-East Arabian Coast, and thereafter recurving, moved in a generally north-easterly direction over Baluchistan and entered Sind and the Punjab on the 4th or 5th of May. Strong winds and heavy rain accompanied the storm in the Punjab, where falls of 4 and 5 inches in twenty-four hours were fairly general. 11·40 inches of rainfall were recorded at Fort Lockhart during the twenty-four hours ending at 8 A M. on the 5th. This storm was followed by a cool wave of unusual intensity.

A feeble depression formed in the Bay on the 22nd and 23rd May which advanced by a curved path to the Arakan Coast and gave moderate to heavy rain in Burma during the last week of the month.

The mean pressure of the Indian region was in large excess in March, in very slight defect in April, and in slight excess in May. The following gives data for the period :—

Month.	Mean Pressure Variation.			
	Whole India.		Tropical India.	Extra-Tropical India.
	From data of Table I.	From data of Table II.		
	"	"	"	"
March	+·045	+·046	+·036	+·055
April	—·004	—·002	—·004	—·001
May	+·012	+·009	+·010	+·009

Pressure hence averaged ·018″ in excess throughout the period.

The following gives local pressure variations for each month and for the period in the various meteorological divisions :—

Meteorological Province.	Pressure anomaly.			
	March.	April.	May.	Period, March to May.
	"	"	"	"
Burma Coast and Bay Islands	—·029	—·010	—·019	—·019
„ Inland	+·009	+·022	—·006	+·008
Assam	+·007	+·001	—·010	—·001
Bengal and Orissa	+·008	—·002	+·001	+·002
Gangetic Plain and Chota Nagpur	+·019	+·002	—·009	+·004
Upper Sub-Himalayas	+·018	+·011	—·003	+·009
North-West Frontier, Indus Valley and North-West Rajputana	—·007	+·014	—·005	+·001
East Rajputana, Central India and Gujarat	—·005	—·009	+·005	—·003
Deccan	+·005	0	+·004	+·003
West Coast	—·032	—·019	+·016	—·012
South India	—·007	+·002	+·005	0

The above shows that in most areas the mean pressure fell abruptly from March to April, but from April to May was either steady or recovered more or less considerably. The fall of pressure from March to April was most marked in North-East India, the Upper Sub-Himalayas and the neighbouring parts of the Central India Plateau and the Peninsula. The recovery of pressure in May was most marked and considerable on the West Coast and moderate in the Central Indian Plateau, but was elsewhere slight and unimportant. A feature of the period was the practically normal pressures in Burma throughout.

The following are the chief features of the mean pressure variations of the period :—

(1) In the Burma Coast pressure was in slight excess in March, in slight defect in April, and almost normal in May, the mean pressure of the period being practically normal.

(2) On the West Coast pressure was in slight excess in March, in moderate defect in April and in moderate excess in May, and on the mean of the period was practically normal.

(3) In most other parts of the country the mean pressure was in general in considerable excess in March, normal or in slight defect or excess in April, and in slight excess in May, being on the mean of the period about ·020″ in excess.

(4) Relatively to the general condition, pressure was in slight to moderate local excess in Upper and North-East India during March and April and in general defect in these areas during May; on the West Coast and in Sbuth India the conditions were generally the reverse of this, *i.e.*, pressure was in slight to moderate relative defect in March and April and in slight excess in May.

(5) The vertical pressure anomalies were in March positive in the extreme north-west and north-east, but negative in the Central Himalayan region and in Central and South India. In April, they were generally negative and moderate in amount, and, in May, generally positive and, except in Baluchistan and Sikkim, small and unimportant.

The following gives data for the period :—

Hill and Plain stations.	Vertical pressure anomaly.			
	March.	April.	May.	Period, March to May.
	"	"	"	"
Leh and Lahore	+·034	—·033	+·003	+·001
Quetta and Jacobabad	+·049	+·024	+·036	+·036
Murree and Peshawar	+·024	—·013	—·003	+·003
Simla and Ludhiana	—·008	—·001	+·020	+·004
Chakrata and Roorkee	—·025	—·006	+·020	—·004
Ranikhet and Bareilly	—·010	+·010	+·012	+·004
Darjeeling and Dhubri	+·005	+·016	+·032	+·018
Mount Abu and Deesa	0?	—·005	—·019	—·008?
Pachmarhi and Hoshangabad	—·024?	—·006	0	—·010?
Chikalda and Buldana	—·003	—·002	+·006	0
Wellington and Coimbatore	—·017	—·010	—·015	—·014

(6) The following gives a statement of the chief abnormal features of the pressure conditions during May :—

The mean pressure of the Indian land area was in May in slight excess (+·012″). Relatively to the general conditions, pressure was in slight to moderate defect in the South-West Punjab, the Indo-Gangetic Plain, North-East India and Burma. In these areas, the defect was greatest at the stations for which data are given below :—

Station.	Variation from normal of mean 8 A.M. pressure of May, 1901.	Pressure anomaly, May, 1901.
	"	"
Jacobabad	—·010	—·022
Allahabad	—·015	—·027
Rangoon	—·018	—·030
Diamond Island	—·016	—·028
Moulmein	—·013	—·025
Mergui	—·010	—·022
Bassein	—·007	—·019

Pressure was in slight to moderate relative excess over the whole of the Peninsula as far north as Lat. 22° N. Within this area the excess was greatest at the Konkan stations, as shewn below :—

Station.	Variation from normal of mean 8 A.M. pressure of May, 1901.	Pressure anomaly, May, 1901.
	"	"
Bombay	+·029	+·017
Poona	+·029	+·017
Ratnagiri	+·037	+·025
Belgaum	+·030	+·018
Goa	+·035	+·023
Mangalore	+·027	+·015
Trivandrum	+·029	+·017
Masulipatam	+·027	+·015
Nellore	+·029	+·017

The pressure variations in May 1901 were similar in general character to those of May in the years 1878, 1891, 1898 and 1900, more especially the first and last years.

III.—The South-West Monsoon Period.—The south-west monsoon currents were much weaker than usual on both sides of India during June and the first three weeks of July. On the West Coast a feeble advance occurred on the 5th of June and from the 5th to the 9th moderate to heavy rain was reported from the West Coast stations. In the east of the Bay a feeble depression passed from the Andaman Sea northwards and entered East Bengal on the 9th.

A second advance occurred on the West Coast on the 13th, and, as at the same time a shallow depression advanced inland from the head of the Bay, monsoon winds held for a few days over the greater part of the country. By the 21st the currents had retreated.

The third advance occurred about the 7th July, when winds strengthened on the West Coast and rain extended into North Bombay and across Rajputana into the Punjab. About the same time a depression passed from the head of the Bay north-westwards and broke up in the Kumaon hills. About the 11th the monsoon currents retreated and from the 12th to the 17th July were replaced by westerly winds down the Gangetic Plain. On the 18th the monsoon currents came on again and during the next three days carried rainfall over the greater part of the country.

During the last week of July and the greater part of August the monsoon currents were of about normal strength on both sides of India. The currents were, however, weaker than usual in September, and the rainfall was in general defect, except in Burma and North-East India.

The following is a brief statement of the more important variations of the mean pressure conditions during the first-half of the monsoon period :—

1. The mean pressure of the Indian land area was almost exactly normal in June and in slight to moderate defect in July. In both months pressure was, relatively to the general distribution, more or less excessive over the greater part of the Peninsula and in relative defect along the line of the hills and in North-East India and Burma. The following gives data for the period :—

Month.	Mean variation of pressure from normal.		
	Extra-Tropical India.	Tropical India.	Whole India.
	"	"	"
June	−·008	+·011	+·001
July	−·007	−·015	−·011

The local features of the pressure distribution were in many respects similar to those obtaining in May. The following gives data :—

Province or Division.	Pressure anomaly.		
	May.	June.	July.
	"	"	"
Burma	−·016	−·012	−·009
Assam	−·010	−·022	+·004
Bengal	0	−·016	−·003
Orissa	+·005	+·002	−·012
Bihar	−·013	−·030	−·007
Chota Nagpur	−·006	−·008	−·036
United Provinces of Agra and Oudh	−·006	−·033	−·005
Punjab	−·002	−·017	0
Sind	−·002	+·007	+·016
Rajputana	+·004	0	+·010
Gujarat	+·006	+·026	+·018
Central India	0	+·002	−·001
Central Provinces	+·003	+·015	+·003
Berar	+·011	+·028	+·013
West Coast	+·016	+·015	+·002
Bombay Deccan	+·009	+·020	+·008
Mysore	−·004	+·021	+·003
Madras Coast	+·007	+·022	−·001
Madras Deccan	+·005	+·026	−·001
South India	+·001	+·021	0

2. The most important of the features which persisted during May, June and July were the following :—

(1) A slight defect in Lower Burma and the Andaman Sea. This is shewn by the following data for stations in that area :—

Station.	Pressure anomaly.		
	May.	June.	July.
	"	"	"
Port Blair	0	+·006	—·003
Mergui	—·022	—·010	—·002
Tavoy	?	—·015	—·015
Moulmein	—·025	—·014	—·014
Rangoon	—·030	—·021?	—·021
Diamond Island	—·028	—·017	—·023
Bassein	—·019	—·013	—·010

(2) A general deficiency of pressure along the whole Indo-Gangetic Plain, most marked in the eastern portion. This is shewn by the following data for representative stations :—

Station.	Pressure anomaly.		
	May.	June.	July.
	"	"	"
Ludhiana	—·010	—·027	—·001
Roorkee	—·009	—·034	—·002
Agra	—·009	—·030	—·012
Lucknow	—·008	—·033	—·010
Allahabad	—·027	—·045	—·019
Benares	—·013	—·034	—·010
Patna	—·014	—·033	—·016
Darbhanga	—·014	—·024	—·004
Gaya	—·017	—·034	—·015
Hazaribagh	—·007	—·016	—·006

(3) A slight to moderate deficiency in the South-West Punjab, North-West Rajputana and Upper Sind, shewn by the following data :—

Station.	Pressure anomaly.		
	May.	June.	July.
	"	"	"
Jacobabad	—·022	—·011	—·001
Bikaner	—·018	—·035	—·027
D. I. Khan	—·010	—·016	—·010
Mooltan	—·002	—·016	—·002

(4) A slight to moderate excess of pressure over Sind, Kathiawar, Gujarat, South-West Rajputana and the western districts of Central India. The following gives data :—

Station.	Pressure anomaly.		
	May.	June.	July.
	"	"	"
Kurrachee	+·008	+·011	+·021
Bhuj	+·016	+·025	+·023
Veraval	—·005	+·034	+·023
Rajkot	+·020	+·022	+·020
Deesa	+·015	+·020	+·024
Neemuch	?	?	+·002
Indore	+·018	+·031	+·026
Surat	+·009	+·020	+·013

3. During June, pressure was slightly lower than usual at Mauritius and in moderate excess at both Zanzibar and the Seychelles. Gradients were hence on the mean of the month less steep than usual in the Trades region. By July, however, these conditions had to some extent passed away, and pressure was in slight defect at both Mauritius and Zanzibar and in moderate defect at the Seychelles. The following gives data :—

Station.	Variation of pressure from normal.		
	May.	June.	July.
	"	"	"
Mauritius	—·012	—·009	—·004
Zanzibar	—·009	+·036	—·006
Seychelles	—·018	+·037	—·024

The following gives the chief features of the mean pressure in India during the second-half of the monsoon period :—

1. Pressure was in considerable defect in August and in considerable excess in September on the mean of the whole Indian area, as shewn below :—

Month.	Extra-Tropical India.	Tropical India.	Whole India.
	"	"	"
August	—·035	—·012	—·023
September	+·046	+·040	+·043

2. The local pressure anomalies were in August generally similar to those obtaining during the preceding months. The following gives data in illustration :—

Province or Division.	Pressure anomaly.			
	Mean of June and July.	August.	September.	Mean of August and September.
	"	"	"	"
Burma	—·011	0	—·002	—·001
Assam	—·009	+·003	—·010	—·004
Bengal	—·010	—·019	—·018	—·019
Orissa	—·005	—·021	+·010	—·006
Bihar	—·019	—·019	—·005	—·012
Chota Nagpur	—·007	—·023	+·004	—·010
United Provinces of Agra and Oudh.	—·019	—·011	—·002	—·007
Punjab	—·009	—·021	—·008	—·015
Sind	+·012	0	+·014	+·007
Rajputana	+·005	—·004	+·015	+·006
Gujarat	+·022	+·016	+·033	+·025
Central India	+·001	—·014	+·021	+·004
Central Provinces	+·009	—·009	+·026	+·009
Berar	+·021	+·016	+·044	+·030
West Coast	+·009	+·023	—·011	+·006
Bombay Deccan	+·014	+·020	+·018	+·019
Mysore	+·012	+·025	—·017	+·004
Madras Coast	+·011	+·021	—·002	+·010
Madras Deccan	+·013	+·019	—·012	+·004
South India	+·011	+·027	—·031	—·002

The above establishes that in August, as in June and July, pressure was, relatively to the general conditions, in slight to moderate defect over the greater part of Upper and North-East India, and in slight to moderate excess over Cutch, Kathiawar, Gujarat and neighbouring areas. In August, however, relatively excessive pressure began to show in the extreme south of the Bay and of the Peninsula, a feature which was not found in the previous months.

3. In September, several changes in the local distribution developed—

(1) The defect over the Gangetic Plain and Chota Nagpur entirely disappeared.

(2) The area of relatively high pressure which shewed over Cutch, Kathiawar and Gujarat in August developed and intensified very considerably in September and at the same time moved eastward, so that over the head of the Peninsula the mean pressure was in September in considerable to large excess.

(3) The relatively high pressures which in August lay over the south of the Peninsula and of the Bay were replaced in September by relatively low pressures over that region.

The following gives data in illustration of these changes :—

Area of change.	Station.	Pressure anomaly.	
		August.	September.
		"	"
(1) Gangetic Plain and Chota Nagpur.	Allahabad	—·033	+·009
	Benares	—·031	+·004
	Sutna	—·036	+·008
	Patna	—·027	—·006
	Gaya	—·025	+·007
	Ranchi	—·023	+·005
	Hazaribagh	—·022	+·002
	Jubbulpore	—·033	+·018
	Cuttack	—·024	+·007
(2) Gujarat, Kathiawar, Central Provinces and Berar.	Bhuj	+·021	+·030
	Veraval	+·014	+·035
	Rajkot	+·010	+·035
	Surat	+·021	+·034
	Malegaon	+·011	+·033
	Indore	+·014	+·043
	Khandwa	+·009	+·042
	Akola	+·013	+·040
	Amraoti	+·018	+·048
(3) South of the Peninsula and Bay Islands.	Trichinopoly	+·031	—·032
	Coimbatore	+·030	—·023
	Negapatam	+·023	—·041
	Salem	+·018	—·042
	Calicut	+·026	—·038
	Cochin	+·027	—·034
	Madras	+·022	—·034
	Colombo	+·026	—·044
	Port Blair	+·020	—·026
	Mergui	+·016	—·015

4. The vertical pressure anomalies were, over the Himalayas, positive and moderate to large in amount during August, indicating that in August pressure was in much less defect at the level of the hill stations than at the level of the plains. In September, on the other hand, pressure was almost equally excessive, but on the whole in slightly greater excess at the level of the plains than at the level of

the hill stations. The following gives data in illustration :—

Pair of Stations.	Vertical pressure anomaly.		
	August.	September.	Period, August and September.
	"	"	"
Leh and Lahore	+·061	—·005	+·028
Murree and Peshawar	+·045	—·002	+·022
Quetta and Jacobabad	+·034	—·008	+·013
Simla and Ludhiana	+·037	+·002	+·020
Chakrata and Roorkee	+·029	—·006	+·012
Ranikhet and Bareilly	+·022	—·008	+·007
Darjeeling and Dhubri	+·011	—·028	—·009
Mount Abu and Deesa	—·012	—·030	—·021
Pachmarhi and Hoshangabad	—·028	—·019?	—·024?
Chikalda and Buldana	—·023	—·007	—·015
Wellington and Coimbatore	—·005	+·008	+·002

An important feature of this period is the succession of cyclonic storms which usually form in the Bay of Bengal, and advance in a north-westerly direction over the land, carrying heavy rainfall to the areas in their track, and hence largely affecting the distribution of the rainfall of the period.

One depression of feeble intensity formed in the Bay in June. It advanced from the Andaman Sea up the east of the Bay and crossed the East Bengal Coast on the 9th.

In July, two shallow depressions formed in the north-west angle of the Bay ; the first advanced north-westwards up the Gangetic Plain at the beginning of the second week and broke up in the Kumaon Hills about the 11th ; the other formed about the 27th, and thereafter moved along a similar track and filled up in North-West India about the end of the month.

Besides these, a shallow land-formed depression, which shewed over the west of Bengal and the east of the United Provinces on the 22nd, subsequently moved westwards over the United and Central Provinces, giving good rain to the areas in its track.

In August, a storm passed up from South-West Bengal to near Jhansi during the first four days of the month.

A second storm formed over Deltaic Bengal about the 8th, and during the next seven days passed up the Gangetic Plain to Agra and gave very heavy rain to parts of the United and Central Provinces.

A similar land-formed storm advanced from Deltaic Bengal to Central India during the fourth week of the month, giving moderately heavy rain to North-East and Central India.

In September a shallow depression, which shewed from the 3rd to the 6th in South-West Bengal, moved first north and then north-eastwards to East Bengal during the next two days and gave heavy rain to the greater part of North-East India.

The only other storm which occurred during September formed in the centre of the Bay on the 19th and 20th and thereafter crossed the Bay to the Circars Coast and, passing inland, moved in a curved track over Raipur, and then northward over the United Provinces to the Nepal Hills, where it broke up on the 25th.

The south-west monsoon of 1901 was characterized by a smaller number of disturbances than usual, and in this, as in several other features, closely resembled the south-west monsoon of 1900.

IV.—The retreating south-west monsoon period.—For a general description of the weather conditions during this period, see the corresponding section in the Chapter on Temperature (pages 883—5).

The following table gives the pressure anomalies in eleven meteorological provinces for each month of the period and for the whole period :—

Meteorological Provinces.	Pressure anomaly.			
	October.	November.	December.	Period, October to December.
	"	"	"	"
Burma Coast and Bay Islands	—·003	+·010	0	+·002
Burma Inland	—·001	+·009	—·004	+·001
Assam	—·011	+·014	—·003	0
Bengal and Orissa	—·012	—·001	0	—·004
Gangetic Plain and Chota Nagpur	—·013	—·003	—·005	—·007
Upper Sub-Himalayas	—·014	+·004	+·004	—·002
North-West Frontier, Indus Valley and North-West Rajputana	—·017	—·005	—·004	—·009
East Rajputana, Central India and Gujarat	+·001	—·005	—·011	—·005
Deccan	+·006	+·006	+·006	+·006
West Coast	+·029	—·001	—·002	+·009
South India	+·009	—·011	+·004	+·001

Pressure was generally in moderate to considerable defect in October, in slight to moderate defect in November and in moderate general excess in December.

The following gives the chief abnormal features of the period :—

1. By October the abnormal excess of pressure, which characterized September, had entirely disappeared, and pressure was in slight to large defect over the greater part of the Indian region. The defect was greatest in the extreme north-west, but was considerable over the greater part of Upper India, North-East India and Upper Burma. It was moderate over the Peninsula and slight on the West Coast.

2. By November the distribution had altered considerably, pressure being approximately normal along the

line of the Himalayas and in North-East India and Burma, as also in the West Satpuras. It was in defect over the west of the Bay and the East Coast, in the Central Gangetic Plain and in Kathiawar. The local relative variations were, however, very slightly marked and of little importance.

3. In December the only features of note were the relatively high pressures in the Upper Sub-Himalayas, Central Bengal, the Central Provinces and the Deccan and the relatively low pressures over Kathiawar. In this, as in the previous month, the local variations were, however, for the most part of no importance.

4. The general excess of pressure which characterized the Indian region during December was not confined to the Indian region, but seemed to be characteristic of the Persian area to an even more marked extent than in India.

The following gives the data available for the Persian area during the month of December :—

VARIATION DATA FOR DECEMBER, 1901.

Baghdad.	Bushire.	Mean of Persian area.	Mean of Indian area.
"	"	"	"
+·052	+·031	+·042	+·019

5. The vertical pressure anomalies were generally positive and moderately strongly marked in October and November, but in December were small and of little importance. The following gives data :—

HILL AND PLAIN STATIONS.	VERTICAL PRESSURE ANOMALY.			Period, October to December.
	October.	November.	December.	
	"	"	"	"
Leh and Lahore	+·082	+·066	+·009	+·052
Quetta and Jacobabad	+·043	+·028	+·017	+·029
Murree and Peshawar	+·054	+·060	+·028	+·047
Simla and Ludhiana	+·045	+·026	—·001	+·023
Chakrata and Roorkee	+·049	+·007	+·004	+·020
Ranikhet and Bareilly	+·040	+·034	+·011	+·028
Darjeeling and Dhubri	+·024 ?	+·011	—·005	+·010 ?
Mount Abu and Deesa	—·009	+·005	+·017	+·004
Pachmarhi and Hoshangabad	+·009	—·009	—·017	—·006
Chikalda and Buldana	—·039	—·008	—·010	—·009
Wellington and Coimbatore	+·008	—·002	—·025	—·006

The year.—The mean pressure of the year was, on the average of the whole Indian area, ·005" above the normal, and was in excess in all provinces, except the Burma Coast. The variations were generally slight and exceeded ·010" only in the North-West Himalayas, East Rajputana and Central India, the Central Provinces (South), Berar and the Konkan.

The following gives mean variation data of the year for twenty areas :—

PROVINCE OR DIVISION.	Variation from normal of mean 8 A.M. pressure of year.	Pressure anomaly of year.
	"	"
Burma	+·001	—·005
Assam	+·004	—·002
Bengal	+·002	—·004
Orissa	+·004	—·002
Bihar	+·001	—·005
Chota Nagpur	+·008	+·002
United Provinces of Agra and Oudh	+·006	0
Punjab	+·005	—·001
Sind	+·010	+·004
Rajputana	+·008	+·002
Gujarat	+·010	+·004
Central India	+·001	—·005
Central Provinces	+·012	+·006
Berar	+·021	+·015
West Coast	+·006	0
Bombay Deccan	+·011	+·005
Mysore	+·003	—·003
Madras Coast	+·010	+·004
Madras Deccan	+·008	+·002
South India	+·002	—·004

Pressure was, on the mean of the year, more largely in excess at the hill stations than at the neighbouring plains stations. The following gives data :—

PAIRS OF STATIONS.	Vertical pressure anomaly of year.
	"
Leh and Lahore	+·021
Quetta and Jacobabad	+·023
Murree and Peshawar	+·016
Simla and Ludhiana	+·010
Chakrata and Roorkee	+·008
Ranikhet and Bareilly	+·012
Darjeeling and Dhubri	+·009
Mount Abu and Deesa	—·034
Wellington and Coimbatore	—·006

The following gives the variations of the mean pressure of Extra-Tropical and Tropical India, and also of the whole of India from the normal, month by month during the year 1901 :—

MONTH.	VARIATION FROM NORMAL OF MEAN PRESSURE IN			Variation of temperature, whole India from Table II.
	Extra-Tropical India from Table II.	Tropical India from Table II.	Whole India from Table II.	
	"	"	"	°
January	+·009	+·006	+·008	—0·3
February	+·031	+·001	+·016	—0·5
March	+·055	+·036	+·046	+0·3
April	—·001	—·004	—·002	—0·1

Month.	Variation from normal of mean pressure in Extra-Tropical India from Table II.	Tropical India from Table II.	Whole India from Table II.	Variation of temperature, whole India, from Table II.
	"	"	"	°
May	+·009	+·010	+·009	+0·3
June	—·008	+·011	+·001	+1·7
July	—·007	—·015	—·011	+0·9
August	—·035	—·012	—·023	+0·4
September	+·046	+·040	+·043	+0·9
October	—·031	—·020	—·026	+2·1
November	—·016	—·022	—·019	+1·3
December	+·011	+·013	+·012	+0·6
Whole year	+·005	+·004	+·005	+0·6

The following gives the progressive variation of the mean annual pressure of the past 27 years for the Indian land area :—

Year.	Number of stations.	Mean anomaly.	Progressive variation.
		"	"
1875	33	—·007	
1876	35	—·007	0
1877	59	+·032	+·039
1878	65	+·002	—·030
1879	81	—·014	—·016
1880	93	—·003	+·011
1881	93	+·002	+·005
1882	93	—·010	—·012
1883	105	—·005	+·005
1884	107	+·010	+·015
1885	113	+·014	+·004
1886	118	—·003	—·017
1887	117	—·006	—·003
1888	109	+·011	+·017
1889	76	+·004	—·007
1890	77	—·009	—·013
1891	72	+·010	+·019
1892	72	—·022	—·032
1893	66	—·001	+·021
1894	66	—·012	—·011
1895	66	+·003	+·015
1896	68	—·001	—·004
1897	74	—·005	—·004
1898	74	—·018	—·013
1899	51	+·004	+·022
1900	49	+·010	+·006
1901	47	+·005	—·005

The following gives a statement of the more important cyclonic storms which affected the Indian area during the south-west monsoon of 1901, drawn up in the same form as in previous years. The tracks of these storms are given in Plate VI at the end of the Summary :—

No.	Month.	Date.	Greatest observed barometric depression.	Character of storm.	Details of storm.
			"		
1	April and May.	24th April to 5th May.	·42	Cyclonic storm of considerable intensity.	This remarkable storm was generated on the 24th and 25th April in the neighbourhood of the Maldive Islands in front of the first temporary advance of south-west winds in the Arabian Sea. It marched in a north-westerly direction towards the Arabian Coast and lay off the Kuria Muria Islands on the 2nd of May. It then recurved rapidly to north and travelling rather quickly passed inland across the Mekran Coast during the 3rd near Omara. It thence moved north-eastwards through South Baluchistan and Sind, where it absorbed a feeble depression already existing in that area. The combined depression passed during the next twenty-four hours into the Punjab, where it filled up during the day at the foot of the hills. The storm gave exceptionally heavy rain to some parts of Baluchistan and the Punjab frontier districts which gave rise to destructive floods in many valleys. H.M.S. *Sphinx* which passed through the inner area of the storm on the afternoon of the 3rd experienced winds of force 11.
2	September.	19th to 25th	" ·15	Cyclonic storm of feeble intensity.	This storm originated in the centre of the Bay nearly midway between the Andamans and Circars Coasts on the 19th and 20th. It travelled along a north-west track towards the Ganjam Coast, which it crossed to the north of Vizagapatam on the morning of the 22nd. It thence advanced into the south-eastern districts of the Central Provinces. It then recurved rapidly to north during the next twenty-four hours and marching through Bundelkhand, Baghelkhand and the eastern and central districts of the United Provinces broke up in the Nepal hills during the 25th. The storm was apparently throughout of feeble intensity, but occasioned a heavy burst of rain in the Gonda, Pilibhit and Naini Tal districts whilst it was breaking up. The strongest winds experienced by vessels in the Bay during the existence of the storm were of force 6 to 7.

No.	Month.	Date.	Greatest observed barometric depression.	Character of storm.	Details of storm.
			"		
3	October	5th to 10th	·27	Cyclonic storm of moderate intensity.	This storm originated in the centre of the Bay on the 5th. It advanced slowly northwards with a slight easting during the next three days and crossed the East Bengal Coast near Barisal on the 8th. It thence passed into East Bengal, where it broke up during the 9th. The storm occasioned moderate to heavy rain in East and Central Bengal. The strongest winds reported by vessels in the Bay during its existence were of force 7.
4	October	11th to 18th	·25	Cyclonic storm of moderate intensity.	This storm formed immediately after the previous disturbance filled up. Like the previous storm it originated in the centre of the Bay and marched in a west-by-north direction during the 13th and 14th and crossed the Ganjam Coast to the south of Vizagapatam on the afternoon of the 14th. The centre was a little to the east of Hanamconda at 8 A.M. of the 15th, near Akola on the 16th and near Rajkot on the 17th. The storm filled up rapidly during this day, but as a small residual depression was transmitted westwards into the Arabian sea, where it, however, failed to redevelop. The storm gave moderate rain to the districts through which it passed. Winds of force 7 were experienced by vessels in the storm area.
5	November.	11th to 19th	·22	Cyclonic storm of moderate intensity.	This storm formed in the south-west of the Bay on the 12th and 13th, and marched in a north-by-east course parallel to the Ghâts during the next three days, and was central to the east of Gopalpur at 8 A.M. of the 16th. It then recurved to north-east and advanced towards the East Bengal Coast which it crossed during the 17th. It continued to drift in the same direction during the next forty-eight hours and filled up in Upper Burma on the 19th. The storm gave heavy down-pours of rain in Orissa and the North Circars on the 16th. Vessels within the storm area experienced winds of force 6 to 9.
6	November.	22nd to 28th	·7	Severe cyclonic storm, or moderate cyclone.	This storm formed in the centre of the Bay between the Andamans and the Coromandel Coast on the 22nd and 23rd, immediately after the breaking up of the previous storm. It was a diffused disturbance until the morning of the 23rd, when it began to concentrate and march along a northerly track. The centre was in about Lat. 15½° N. and Long. 87° E. at 8 A.M. of the 25th. It continued to march northwards and crossed the coast near Saugor Island on the morning of the 26th. The storm followed a north-east track during the next 24 hours and was central near Bogra on the morning of the 27th. It was now of slight intensity and broke up during the day. It gave moderate to heavy rain in Bengal, Burma, Orissa and Ganjam. The storm was a severe disturbance and occasioned very stormy weather in the Bay, the F. L. V. *Planet* and *Torch* experiencing hurricane winds of force 11 to 12.

The following is a similar statement of the only important land-formed depression generated in the plains of Bengal during the south-west monsoon of 1901 :—

No.	Month.	Date.	Greatest observed barometric depression.	Character of storm.	Details of storm.
1	September.	3rd to 10th	·23	Land-formed storm of moderate intensity.	This land-formed depression was generated in Lower Bengal on the 3rd and 4th under the usual conditions. It intensified slightly on the 5th and 6th, during which period it was practically stationary. It began to drift slowly northwards during the 6th and lay over Central Bengal a little to the west of Berhampore at 8 A.M. of the 7th. It then recurved and marching east-north-eastwards passed into East Bengal on the 9th. It broke up rapidly during the next twenty-four hours in the Assam Hills. The storm was noteworthy for the heavy rain it gave to East and Central Bengal. The track of this storm is not given in the storm track chart.

Winds.

I.—The cold weather period.—During this period a series of fourteen depressions affected the weather in Northern and Central India. Most of these were, however, of feeble intensity and advanced by more southerly tracks than usual, and hence failed to give rise to well-formed secondary depressions in the Punjab. Only two of the storms, *viz.*, those of the 9th to the 14th January and the 1st to the 8th February, were fairly deep depressions and gave heavy snow in the Western Himalayas.

During this period the air movement was more or less above its normal intensity at most of the hills stations in North-Western and Central India and feebler than usual in the Sikkim Himalayas and Baluchistan. The following gives data in illustration :—

Station.	Mean daily air movement, in miles.					
	Actual, January 1901.	Normal, January.	Percentage variation from normal, January.	Actual, February 1901.	Normal, February.	Percentage variation from normal, February.
Leh	32	22	+45	34	29	+17
Srinagar	79	71	+11	109	74	+47
Simla	86	128	—33	116	131	—11
Chakrata	168	123	+37	205	134	+53
Ranikhet	50	44	+14	82	57	+44
Mount Abu	142	119	+19	186	140	+33
Pachmarhi	125	78	+60	159	98	+62
Chikalda	175	123	+42	162	148	+ 9
Darjeeling	73	88	—17	113	137	—18
Quetta	50	74	—32	41	88	—53

Winds were feebler than usual during the period in the Punjab, Rajputana, Sind and Orissa, as is shown by the following data:—

Area.	Mean daily air movement, in miles, during cold weather period, January and February.		
	Actual.	Normal.	Percentage variation from normal.
Punjab	46	54	—15
Rajputana	145	149	— 3
Sind	100	153	—35
Orissa	142	169	—16

The air movement was practically normal in the United Provinces and Chota Nagpur, but was stronger than usual in Bengal, Bihar and Burma.

The following gives data for these areas :—

Area.	Mean daily air movement, in miles, during cold weather period, January and February.		
	Actual.	Normal.	Percentage variation from normal.
Burma	139	118	+18
Bengal	126	114	+11
Bihar	89	77	+16
Chota Nagpur	154	154	0
United Provinces of Agra and Oudh	64	62	+ 3

The chief feature of the air movement in February was the prevalence of abnormal northerly winds on the Bengal Coast indicating a delay in the establishment of the local sea breezes which usually set in over that area during the second half of the month. Winds were, on the mean of the period, irregular in Berar, Central India and the Central Provinces, although they were practically normal in steadiness.

The following gives data for steadiness in illustration :—

Area.	Percentage of mean wind steadiness.			
	January.	February.	Mean of period, January and February.	Variation from normal of period, January and February.
Berar	31	23	27	+4
Central Provinces	28	16	22	—4

The air movement in South India and Mysore was practically normal both in January and February. It was, on the other hand, somewhat stronger than usual on the mean of the period in the Deccan, the Central Provinces, Berar, and on the Konkan and Madras coasts.

The following gives comparative data showing the variations from normal of the intensity of the diurnal air movement in the Peninsula during the period :—

Area.	Mean daily air movement, in miles.				
	Actual, January.	Actual, February.	Mean actual of period, January and February.	Mean normal of period, January and February.	Percentage variation from normal of period, January and February.
Central Provinces	101	130	116	96	+20
Berar	119	175	147	116	+27
Bombay Deccan	179	230	205	188	+17
Madras Deccan	157	129	143	90	+59
Madras Coast	133	159	146	130	+12
Mysore	136	146	141	142	—1
Konkan	164	188	176	163	+8
South India	123	137	130	123	+6

The following statement shows the mean wind force and its variation from the normal in the Bay of Bengal and the Arabian Sea during the period :—

Area.	Mean daily force of wind (Beaufort's Scale).					
	Actual, January.	Variation from normal, January.	Actual, February.	Variation from normal, February.	Mean of period, January and February.	Variation from normal of period, January and February.
Bay of Bengal .	3·0	0	2·9	+0·4	3·0	+0·2
Arabian Sea .	3·3	0	3·8	+0·8	3·6	+0·4

The data indicate that the drift from the north-east across the Bay of Bengal and Arabian Sea was of normal intensity in January and stronger than usual during the succeeding month.

The air movement was hence more or less above normal strength over the greater part of the country during the period, an indication that the cold weather conditions were much more strongly marked than usual. The winter was prolonged beyond its normal date and thus delayed the establishment of the usual sea breezes on the Bengal coast.

II.—The hot-weather period.—Weather was on the whole less disturbed than usual in March and April over the greater part of the Indian area, but was very unsettled in Upper India and Baluchistan in May.

Temperature was on the mean of the month of May more or less in excess of the normal, except locally in the Punjab and the Deccan, where it was normal or in defect. The excess was generally small in amount, an indication that the hot weather conditions were not more pronounced than usual.

The following were the chief features of the air movement of the period :—

(1) Winds were steadier and stronger than usual in Bengal. The direction varied irregularly from the normal at different stations, but was, on the whole, much more westerly than usual at Chittagong and Calcutta and normal at Saugor Island.

The following gives data showing the actual deflection :—

Station.	Westerly deflection.			
	March.	April.	May.	Mean of period, March to May.
	°	°	°	°
Chittagong . . .	+54	+17	+39	+37
Calcutta . . .	+52	+14	+ 2	+23
Saugor Island . .	+21	— 3	—18	0

(2) Winds were of normal strength in the United Provinces.

(3) Winds were on the mean of the period feebler than usual in Bihar, Chota Nagpur, the Punjab and Rajputana.

(4) Winds were more vigorous than usual at the hill stations in Northern and Central India.

(5) Winds were stronger than usual in Berar, the Central Provinces, the Deccan, Mysore and Southern India. They were, on the other hand, below normal strength in the coast districts of the Peninsula. Winds were, on the whole, somewhat more westerly than usual in the Deccan in April and May.

(6) Winds were of normal strength in the Andamans, but contained an unusually strong westerly element in May.

The following gives data showing the percentage variation of the air movement month by month from the normal during this period in Northern and Central India :—

Area.	Percentage variation from normal of mean daily air movement in			
	March.	April.	May.	Period, March to May.
Bengal	—11	+16	+ 5	+ 3
Bihar	—29	—23	—11	—21
Chota Nagpur	— 7	—10	—17	—11
United Provinces of Agra and Oudh	—15	0	+ 7	— 3
Punjab	— 9	—17	+ 3	— 8
Sind	—26	—19	— 8	—18
Rajputana	—11	—15	— 7	—11

The preceding data show that the air movement in the hot season over the greater part of Northern India was weaker than usual. The deficiency was on the whole most marked in the months of March and April.

The following gives corresponding data for the Peninsula :—

Area.	Percentage variation from normal of mean daily air movement in			
	March.	April.	May.	Period, March to May.
Central Provinces . . .	+10	+13	— 1	+7
Berar	— 3	+ 2	+ 8	+2
Bombay Deccan	— 1	— 6	+17	+3
Madras Deccan	+19	+ 9	— 6	+7
Mysore	+20	+ 7	—13	+5
Konkan	—10	0	— 4	—5
Madras Coast	—14	+ 4	— 9	—6
South India	+21	+ 5	— 6	+7

These data indicate that while the air movement was stronger than usual in the interior districts it was not so vigorous as usual in the coast districts.

The following gives mean data for the winds in the Bay of Bengal and Arabian Sea for the period :—

Area.	Variation of mean daily force of wind (Beaufort's notation) in				Normal mean strength of winds during period.
	March.	April.	May.	Period, March to May.	
Bay of Bengal . .	+0·2	—0·1	+0·1	+0·1	2·7
Arabian Sea . . .	+0·1	—0·1	—0·6	—0·2	2·9

The mean intensity of the air movement was practically normal, being in slight excess in the Bay of Bengal and in defect in the Arabian Sea.

III.—The south-west monsoon period.—The Arabian Sea current set in slightly later than usual in the second week of June and extended very slowly into the interior. The Bay current was established about the normal date on the Bengal coast.

The first burst of the monsoon current was not so strong as usual and withdrew from North-Western and Central India in the third week of June. The break thus initiated lasted until the 7th or 8th July. Both currents were weaker than usual in July and of about normal strength in August. The Bombay current retreated from North-Western and Central India in the first week of September.

The comparative data in the table below based upon the anemometric observations of four coast and four inland stations under the influence of the two currents give an approximate estimate of the strength of the air movement of the two branches of the monsoon currents:—

Month.	Percentage variation from normal of mean daily air movement.			
	Bay of Bengal current.		Bombay current.	
	Four coast stations.	Four inland stations.	Four coast stations.	Four inland stations.
June	+12	—18	—22	+ 3
July	— 9	—12	—12	+ 3
August	+ 6	+ 1	— 2	+12
September . . .	— 4	+14	—14	— 7
Mean of period .	+ 1	— 4	—12	+ 3

The data given in the preceding table show that the air movement varied irregularly and in opposite directions at the land and coast stations in the case of the Bengal current, but on the mean of both was of approximately normal intensity. The data for the Bombay current indicate that it was considerably below normal strength in the coast districts during the greater part of the period.

The following table gives corresponding data for the steadiness of the two currents :—

Month.	Variation from normal of percentage of mean wind steadiness.			
	Bay of Bengal current.		Bombay current.	
	Four coast stations.	One inland station.	Three coast stations.	Four inland stations.
June	+11	+10	+ 3	+ 6
July	+ 1	— 9	+ 6	+ 7
August	+14	+10	+11	+10
September . . .	+ 3	+ 7	+ 8	+ 1
Mean of period .	+ 7	+ 5	+ 7	+ 6

Both currents were, as shown by the data, steadier than usual over the whole area dominated by them and more especially in the coast districts.

The comparative data given in the following table of the mean actual and normal force of the winds derived from the meteorological information contained in the logs of vessels navigating the Indian seas indicate that the air movement was below the normal to a moderate extent throughout the period in the Arabian Sea, and was of normal intensity in the Bay of Bengal on the mean of the whole period. The actual variations are chiefly derived from the vessels following four or five tracks in these seas, and hence do not necessarily indicate a variation common to the whole area. They, however, almost certainly establish that the current in the Arabian Sea was below its normal strength throughout the period :—

Month.	Mean daily force of wind (Beaufort's notation) in the					
	Bay of Bengal.			Arabian Sea.		
	Actual, 1901.	Normal.	Variation from normal.	Actual, 1901.	Normal.	Variation from normal.
June . . .	4·3	4·0	+0·3	4·0	4·5	—0·5
July . . .	4·2	4·0	+0·2	4·3	4·6	—0·3
August . .	4·0	4·0	0	3·9	4·3	—0·4
September . .	3·1	3·7	—0·6	3·1	3·5	—0·4
Mean of period .	3·9	3·9	0	3·8	4·2	—0·4

The following summarizes the chief features of the air movement during the first half of the monsoon period (June and July).

(1) Winds were during this period more westerly than usual in the Bay Islands and Lower Burma and were more southerly than usual in Bengal and Orissa.

The following data illustrate these features:—

Station.		Deflection from normal.		
		June.	July.	Period, June and July.
		°	°	°
Port Blair	Increased westing.	+25	+21	+23
Rangoon	Increased westing.	+ 4	+ 5	+ 4
Diamond Island	Increased westing.	+12	+10	+11
Chittagong	Increased southing.	+16	+18	+17
Calcutta	Increased southing.	+ 2	−15	− 6
Saugar Island	Increased southing.	+ 9	+21	+15
False Point	Increased southing.	− 1	+16	+ 7

(2) Winds were on the mean of the period steadier than usual over the whole of Northern India. They were feebler than usual in Bihar, Chota Nagpur, the Punjab and Sind and above their normal strength in Bengal, the United Provinces and Rajputana. The following gives data:—

Area.	Percentage variation from normal of mean daily air movement in		
	June.	July.	Period, June and July.
Bengal	+26	+11	+18
Bihar	−26	−29	−27
Chota Nagpur	+ 3	−10	− 3
United Provinces of Agra and Oudh	+20	+17	+18
Punjab	−14	−11	−12
Sind	−11	− 7	− 9
Rajputana	+ 4	+ 4	+ 4

(3) Winds were on the whole stronger than usual over the interior of the area, usually dominated by the Bombay current, as is shown by the following data:—

Area.	Percentage variation from normal of mean daily air movement in		
	June.	July.	Period, June and July.
Central Provinces	+15	+13	+14
Berar	+19	+17	+18
Bombay Deccan	0	+ 8	+ 4
West Coast	−13	− 3	− 8
Madras Deccan	− 6	+ 5	0
South India	+26	+ 1	+13

(4) Winds were more directly from the west than usual on the Konkan Coast and in South India. The following gives data in illustration:—

Station.	Westerly deflection.		
	June.	July.	Period, June and July.
Bombay	+11°	+4°	+7°
Karwar	−10	+4	−3
Salem	+17	+13	+15

The most important feature of the period, June and July, was the increased westing in the wind direction in the centre of the Bay, Lower Burma and South India, indicating an unusually strong set of the currents to these areas.

The following gives the more noteworthy features of the air movement during the second-half of the monsoon period:—

(1) Winds were more westerly than usual at Port Blair and the Bengal and Orissa Coast stations, as is shown by the following data:—

Station.	Westerly deflection.		
	August.	September.	Period, August and September.
Port Blair	+19°	+10°	+14°
Chittagong	+24	+25	+24
Calcutta	− 7	+52	+22
Saugor Island	+10	+31	+20
False Point	+11	+10	+10

(2) Winds were feebler than usual throughout the period in Northern India, except in Bengal and the United Provinces, where they were slightly above their normal strength.

The following gives data in illustration:—

Area.	Percentage variation from normal of mean daily air movement in		
	August.	September.	Period, August and September.
Bengal	+14	+20	+17
Bihar	−32	−53	−42
Chota Nagpur	−22	−6	−14
United Provinces of Agra and Oudh	+5	+3	+4
Punjab	−16	−22	−19
Sind	−1	−6	−3
Rajputana	−7	−1	−4

(3) Winds were unusually westerly over the greater part of Northern India in September in consequence of the early withdrawal of the monsoon. This is shown below :—

Station.	Westerly deflection of wind, September 1901.
Chittagong	+25
Calcutta	+52
Saugor Island	+31
False Point	+10
Allahabad	+42
Meerut	+33
Lahore	+109
Ludhiana	+33
Jaipur	+43

(4) Winds were generally lighter and less steady than usual in the Peninsula in the month of September, although steadier and stronger than usual in August.

The following data illustrate these features :—

Area.	Variation from normal of wind steadiness in			Percentage variation from normal of mean daily air movement in		
	August.	September.	Period, August and September.	August.	September.	Period, August and September.
Central Provinces	+19	— 2	+8	+38	— 1	+18
Berar	+10	+ 9	+9	+17	— 2	+ 7
Madras Deccan	+13	—12	0	+38	—13	+12
West Coast	+14	+12	+13	+6	— 2	+ 2
Bombay Deccan	+ 3	— 2	0	+20	— 5	+ 7
South India	—19	—19	—19	+ 4	—18	— 7

It may be noted that there were no large or persistent variations in the direction of the air movement over these areas.

(5) The winds at the hill stations in Rajputana and the Central Provinces were as largely above their normal strength as in the neighbouring plains :—

Station.	Percentage variation from normal of daily air movement in		
	August.	September.	Period, August and September.
Mount Abu	+22	+47	+34
Pachmarhi	+50	0	+25

The following table gives the percentage variation of the strength of the winds from the normal month by month in different provinces throughout the whole season :—

Area.	Percentage variation from normal of mean daily air movement in				
	June.	July.	August.	September.	Period, June to September.
Burma	—6	—17	+11	—22	—8
Bengal	+26	+11	+14	+20	+18
Bihar	—26	—29	—32	—53	—35
Chota Nagpur	+3	—10	—22	—6	—9
Orissa	+9	—14	—6	—3	—3
United Provinces of Agra and Oudh.	+20	+17	+5	+3	+11
Punjab	—14	—11	—16	—22	—16
Sind	—11	—7	—1	—6	—6
Rajputana	+4	+4	—7	—1	0
Central Provinces	+15	+13	+38	—1	+16
Berar	+19	+17	+17	—2	+13
West Coast	—13	—3	+6	—2	—3
Bombay Deccan	0	+8	+20	—5	+6
Madras Deccan	—6	+5	+38	—13	+6
Mysore	+1	—3	0	—26	—7
Madras Coast	+8	—4	—10	—17	—6
South India	+26	+1	+4	—18	+3

The chief features of the south-west monsoon air movement were hence as follows :—

(1) The Bay current was of practically normal strength during the greater part of the period. It was, however, determined to a greater extent than usual to Bengal and Burma in June and July.

(2) The Arabian Sea current was weaker than usual throughout the whole season and was deflected more largely than usual to South India during the first-half of the period.

The south-west monsoon humid currents withdrew from Upper India in the first week of September and hence more than a week earlier than usual.

IV.—The retreating south-west monsoon period.—Northerly winds of the winter monsoon set in over the north and centre of the Arabian Sea in the fourth week of October and extending rapidly southwards were established over the whole of that area as far south as Latitude 8° or 7° N. by the beginning of November.

The retreating monsoon over the Bay was feeble during the second fortnight of October, but increased rapidly in the first week of November and was of normal intensity from the 10th until about the 13th or 14th of December, when it withdrew completely from the south of the Bay.

The following gives the more important features of the air movement in the Indian area during this period :—

(1) Winds were stronger and steadier than usual on the mean of the period in the Bay Islands. They, however, varied irregularly in direction from month to month, being much more westerly than usual in October and slightly more easterly in December.

The following data illustrate these features :—

Station.	October.			November.			December.			Mean of period, October to December.	
	Variation of mean wind steadiness from normal.	Westerly deflection.	Variation of mean wind velocity per diem from normal.	Variation of mean wind steadiness from normal.	Southerly deflection.	Variation of mean wind velocity per diem from normal.	Variation of mean wind steadiness from normal.	Easterly deflection.	Variation of mean wind velocity per diem from normal.	Variation of mean wind steadiness from normal.	Variation of mean wind velocity per diem from normal.
Port Blair .	+30	+63	+28	+24	+35	+4	0	+3	−22	+18	+3
Cocos Island .	+13	+90	?	+43	+15	?	0	+17	?	+19	?

(2) Winds were very steady, but feebler than usual over the greater part of Northern India throughout the period as is shown by the following data :—

Area.	Percentage variation from normal of wind steadiness in				Percentage variation from normal of mean daily air movement in			
	October.	November.	December.	Period, October to December.	October.	November.	December.	Period, October to December.
Bengal . . .	+21	+2	+15	+13	−6	+27	−3	+6
Bihar . . .	+26	−23	−35	−11	+6	−39	−53	−29
Chota Nagpur . .	+8	+2	+15	+8	−63	0	+9	−18
United Provinces of Agra and Oudh.	+3	+1	+8	+4	−13	−11	−15	−13
Punjab . . .	−1	0	+9	+3	−19	−31	−33	−28
Sind	+5	+3	−4	+1	−12	−33	−41	−29
Rajputana . . .	+25	+3	−21	+2	−6	−1	−12	−6

(3) The air movement was stronger than usual over the north and centre of the Peninsula, and was more or less below its normal intensity in South India and in the Konkan and Coromandel Coast districts.

The following gives data for these areas :—

Area.	Percentage variation from normal of mean daily air movement in			
	October.	November.	December.	Period, October to December.
Central Provinces . .	+31	+18	−11	+13
Berar	+11	+9	+3	+8
Bombay Deccan . .	+14	+15	+21	+17
West Coast . . .	−8	−7	−6	−7
Madras Deccan . .	+10	−2	+8	+5
Madras Coast . .	−18	−14	+1	−10
Mysore	−14	−9	+3	−7
South India . . .	−33	−46	−17	−32

(4) The air movement was also steadier than usual over the whole of that area, except in the Konkan coast districts, as is shown below :—

Area.	Variation from normal of mean daily wind steadiness in			
	October.	November	December.	Period, October to December.
Central Provinces . .	+1	+15	−4	+4
Berar	−1	+22	+13	+11
Bombay Deccan . .	+34	+9	+3	+15
West Coast . . .	0	−11	−13	−8
Madras Deccan . .	+3	−6	+7	+1
Madras Coast . .	+2	−5	+10	+2
Mysore . . .	+11	−2	+2	+4
South India . . .	+6	−16	+16	+2

(5) Winds were unusually northerly on the Coromandel Coast in October and more directly from the east than usual during the remaining two months of the period.

Humidity.

The variations of the mean monthly and annual aqueous vapour pressure and humidity values from the calculated normals for the year 1901 are given in Tables XVI and XVII. The normal values employed in the determination of the variations are given in Tables XIII and XIV of the Annual Summary for the year 1896. Tables XVIII to XXI give variation data of aqueous vapour pressure and relative humidity for each month of the year and for the year—

1st.—For sixteen meteorological areas adopted in the geographical summaries of meteorological data in the annual reports issued by the department previous to 1891.

2nd.—For nine meteorological provinces of the Empire.

TABLE XVI.—*Comparison of the monthly mean vapour pressure data of 1901 with the averages of past years.*

Meteorological Province.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
		"	"	"	"	"	"	"	"	"	"	"	"	"
Burma Coast and Bay Islands.	Port Blair	+·064	+·073	+·049	+·049	−·012	0	+·018	+·017	+·028	−·004	−·008	−·041	+·019
	Rangoon	0	+·087	−·015	−·011	+·001	+·015	+·012	0	+·013	−·026	+·007	−·045	+·003
	Diamond Island	+·035	+·077	−·006	+·008	+·001	+·016	+·003	+·009	+·033	+·018	+·052	−·027	+·018
	Cocos Island	+·025	+·074	−·012	−·002	+·005	+·001	−·003	−·001	+·028	+·001	+·047	−·023	+·012
Bengal and Orissa	Chittagong	−·035	−·038	−·090	−·007	−·032	+·036	−·005	+·012	+·015	+·021	+·012	+·003	−·009
	Calcutta (Alipore)	+·017	+·025	−·106	−·038	−·048	+·008	+·001	+·001	−·025	+·033	+·002	−·006	−·011
	Saugor Island	−·061	−·019	−·076	+·006	−·011	+·038	0	−·014	−·001	+·033	+·008	−·020	−·010
	False Point	+·004	−·009	−·041	+·029	+·004	+·028	+·030	+·020	+·005	+·064	+·044	−·006	+·014
Gangetic Plain and Chota Nagpur.	Hazaribagh	+·043	+·112	+·038	−·001	−·007	−·099	−·034	−·013	−·069	+·016	+·004	−·001	−·001
	Darbhanga	+·019	+·063	−·002	−·088	−·049	+·010	+·007	+·013	−·050	+·022	−·008	−·032	−·008
	Allahabad	+·035	+·055	+·043	+·027	+·002	−·156	−·008	+·029	−·016	+·048	−·013	−·018	+·002
Upper Sub-Himalayas.	Dehra Dun	+·010	−·014	+·041	−·051	−·013	−·184	−·045	+·020	−·031	+·065	+·011	−·027	−·018
	Roorkee	+·023	+·014	+·030	−·059	−·038	−·165	−·060	+·048	−·035	+·030	+·001	−·022	−·019
	Meerut	+·026	+·028	+·022	−·043	−·021	−·201	−·024	+·071	−·076	−·010	−·012	−·032	−·023
	Lahore	+·036	+·037	+·058	+·010	+·019	−·103	−·055	+·050	−·087	+·001	+·013	−·013	−·003
	Ludhiana	+·037	+·016	+·061	−·056	−·018	−·111	−·046	+·036	−·083	−·019	+·039	−·034	−·015
North-West Frontier, Indus Valley and North-West Rajputana.	Peshawar	+·004	+·007	+·042	−·046	+·005	−·086	−·035	+·016	−·007	+·071	+·031	−·012	−·001
	Jacobabad	+·039	−·021	+·037	−·049	+·076	+·079	+·086	+·063	+·037	+·049	+·039	+·023	+·038
	Kurrachee	+·034	+·007	−·014	−·074	+·009	+·010	+·009	+·016	−·046	+·080	+·020	+·035	+·007
Eastern Rajputana, Central India and Gujarat.	Jaipur	+·011	+·016	+·009	−·055	−·034	−·135	−·060	+·026	−·119	+·040	+·014	−·017	−·026
	Deesa	−·006	−·075	−·066	−·118	−·029	−·045	−·039	+·028	−·148	+·011	−·085	−·028	−·050
Deccan	Belgaum	+·043	+·039	+·008	+·042	+·032	+·013	+·017	+·015	+·010	+·014	+·021	+·013	+·022
	Sholapur	+·003	+·008	+·043	+·074	+·038	+·027	+·027	+·028	−·056	−·075	−·038	−·042	−·003

TABLE XVI.—*Comparison of the monthly mean vapour pressure data of 1901 with the averages of past years*— concld.

METEOROLOGICAL PROVINCE.	STATION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	YEAR.
		"	"	"	"	"	"	"	"	"	"	"	"	"
DECCAN—*concld.*	Poona	+·010	—·044	—·021	+·009	+·039	—·002	+·024	+·031	—·014	+·017	—·048	—·033	—·003
	Akola	+·049	—·015	+·052	?	+·054	—·003	+·018	+·040	—·038	—·036	—·031	—·065	?
	Buldana	+·012	—·071	+·014	+·021	—·024	—·048	—·002	+·008	—·049	—·040	—·071	—·082	—·028
	Khandwa	+·033	—·058	+·057	—·009	—·004	—·019	+·013	+·018	—·041	—·035	—·036	—·058	—·012
	Nagpur	+·068	+·077	+·139	+·157	+·029	—·041	0	+·021	—·018	—·032	—·055	—·071	+·023
	Hyderabad (Deccan)	+·030	+·077	+·041	—·013	+·045	+·004	+·011	—·001	?	?	?	?	?
WEST COAST	Bombay	—·028	—·120	—·010	+·012	—·007	—·010	+·007	+·011	+·005	+·030	—·026	—·019	—·013
	Karwar	+·054	—·037	+·002	+·021	—·035	—·018	—·004	—·008	+·003	—·004	+·020	—·012	—·002
SOUTH INDIA	Salem	+·022	+·088	—·024	+·008	+·028	+·002	+·012	+·004	+·049	+·014	+·044	+·002	+·021
	Chitaldroog	+·123	+·183	+·078	+·118	+·056	+·036	+·069	+·060	+·087	+·048	+·068	+·049	+·081
	Bangalore	+·048	+·129	—·052	—·008	+·002	—·009	—·006	—·007	+·021	+·011	—·003	—·005	+·010
	Hassan	+·045	+·099	—·042	—·051	—·008	+·004	+·037	+·022	+·017	+·009	+·008	—·023	+·016
	Mysore	+·005	+·101	+·002	—·013	+·046	+·014	+·013	—·024	+·024	+·029	+·010	+·022	+·019
	Madras	+·107	+·095	+·010	+·022	+·017	+·015	+·011	+·040	+·080	+·046	+·046	—·001	+·042
	Bellary	+·001	+·093	+·011	—·052	—·082	—·082	—·066	—·061	—·076	—·076	0	—·042	+·036
HILL STATION, BALUCHISTAN.	Quetta	+·040	—·038	+·002	—·025	+·040	—·078	—·036	—·029	—·034	0	—·007	—·009	—·015
HILL STATIONS, NORTHERN INDIA.	Leh	—·041	—·046	—·041	—·004	—·014	—·032	—·014	+·025	+·005	·007	+·024	—·036	—·015
	Srinagar	+·016	+·034	+·079	+·049	+·090	+·015	+·037	+·117	+·041	+·123	+·049	+·018	+·056
	Kailang	—·012	+·004	—·005	—·012	+·006	—·023	—·010	+·036	—·012	+·007	—·006	—·001	—·002
	Simla (Ridge)	+·006	+·006	+·013	—·067	—·024	—·111	—·067	+·009	—·058	—·020	—·007	—·021	—·028
	Chakrata	+·007	+·005	+·014	—·035	+·023	—·071	—·033	+·011	—·042	+·027	—·019	—·015	—·011
	Ranikhet	—·008	—·002	+·002	—·054	—·029	—·100	—·003	+·023	—·034	+·040	+·005	—·017	—·011
	Katmandu	+·008	+·014	+·017	—·047	—·027	+·001	+·016	+·042	—·007	+·041	+·009	—·005	+·005
	Darjeeling	—·006	+·011	+·010	—·020	—·008	+·014	+·008	+·027	+·004	+·040	+·007	?	?
HILL STATIONS, CENTRAL INDIA.	Mount Abu	+·013	—·039	+·002	—·049	+·002	—·013	—·007	+·019	—·071	+·014	—·051	—·010	—·016
	Pachmarhi	+·032	+·019	+·056	+·050	+·005	+·020	+·037	+·016	—·019	—·005	—·024	—·048	+·012
	Chikalda	+·019	—·033	+·015	+·041	+·033	—·033	+·017	+·013	—·022	—·006	—·049	—·060	—·005
HILL STATION, SOUTHERN INDIA.	Wellington	+·064	+·116	—·015	+·023	+·010	+·001	+·004	+·006	+·045	+·005	+·022	—·019	+·022
EXTRA INDIAN STATIONS.	Aden	+·028	—·088	—·102	—·020	—·009	—·031	—·007	+·005	—·044	+·011	+·028	—·048	—·023
	Perim	+·099	—·006	+·041	+·117	+·183	+·145	+·145	+·149	+·118	+·113	+·118	+·174?	+·116?
	Zanzibar	+·014	0	+·001	+·008	+·010	—·054	+·011	—·021	—·014	—·019	+·002	—·003	—·005
	Port Victoria (Seychelles)	+·006	+·024	+·040	+·053	+·031	+·015	+·042	—·008	—·013	+·013	—·011	—·008	+·015
	Mauritius (Pamplemouses).	—·006	—·007	+·047	—·003	+·018	+·001	+·024	—·009	—·018	+·010	—·002	+·024	+·007

TABLE XVII.—*Comparison of the monthly mean relative humidity data of 1901 with the averages of past years.*

Meteorological Province.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
Burma Coast and Bay Islands.	Port Blair	+1	+1	−1	−3	0	−3	−1	−1	−2	0	+3	−5	0
	Rangoon	−4	+3	−4	−3	+1	−2	0	+1	−3	+1	−4	−2	−1
	Diamond Island	−3	+2	−4	−2	+3	−4	−1	0	−4	0	−1	−5	−2
	Cocos Island	−3	+1	−4	−5	−3	−1	−1	−2	−4	0	+1	−2	−2
Bengal and Orissa	Chittagong	−4	−9	−12	+1	−7	−2	−4	−2	0	+1	+2	+2	−3
	Calcutta (Alipore)	+1	+1	−12	−7	−6	−6	−2	−3	−4	−4	−1	−4	−4
	Saugor Island	−2	0	−7	0	−4	−2	−1	−3	−2	−1	+2	−2	−2
	False Point	0	−1	−6	0	−4	−5	0	+1	−2	+1	+5	−3	−1
Gangetic Plain and Chota Nagpur.	Hazaribagh	+15	+21	+6	−1	0	−21	−8	−3	−10	−4	−1	−3	−1
	Darbhanga	+8	+8	0	−9	−2	−1	−1	−1	−6	−6	−4	−7	−2
	Allahabad	+11	+8	+6	+2	−2	−21	−10	0	−3	−3	−6	−5	−2
Upper Sub-Himalayas.	Dehra Dun	+7	0	+6	−3	+1	−24	−8	+2	−2	+3	−1	−6	−2
	Roorkee	+10	+2	+4	−4	−1	−16	−8	+6	−3	+3	0	−2	0
	Meerut	+10	+7	+4	−3	−4	−19	−4	+7	−8	−4	−3	−6	−2
	Lahore	+13	+10	+6	+5	+4	−6	0	+2	−6	−2	+1	−2	+2
	Ludhiana	+11	+4	+6	−5	−1	−12	−3	−1	−8	−6	+2	−8	−2
North-West Frontier, Indus Valley and North-West Rajputana.	Peshawar	+4	+2	+3	−3	+4	−5	−6	−7	0	+4	+1	−5	0
	Jacobabad	+9	+1	−1	−5	+3	−1	+2	+1	+4	0	+4	+4	+2
	Kurrachee	+6	+4	−6	−14	−3	−5	−3	0	−3	+4	−4	+1	−2
East Rajputana, Central India and Gujarat.	Jaipur	+8	+6	−1	−6	−5	−16	−12	−1	−16	−3	−5	−8	−5
	Deesa	+4	−5	−5	−8	+1	−6	−12	0	−17	−5	−14	−8	−6
Deccan	Belgaum	+5	+10	+3	+7	+7	+2	+1	+1	−4	+2	+2	+3	+3
	Sholapur	−2	+3	+3	+8	+4	−1	+2	+4	−10	−12	−8	−8	−1
	Poona	+6	+1	+1	+5	+8	−1	+1	+4	−4	+2	−2	−1	+2
	Akola	+8	0	+7	?	+3	−4	+1	+8	−7	−5	−3	−8	?
	Buldana	+5	−5	+3	+4	−3	−8	−2	+4	−8	−8	−9	−13	−3
	Khahdwa	+8	−5	+3	−2	−3	−8	−2	+2	−9	−11	−8	−11	−3
	Nagpur	+9	+12	+15	+14	+3	−8	−2	+7	−4	−7	−8	−10	+2
	Hyderabad (Deccan)	−3	+9	+4	−1	+7	−1	+3	−2	?	?	?	?	?
West Coast	Bombay	−2	−9	−2	−2	−5	−1	0	+1	−4	+2	−6	−6	−3
	Karwar	+2	−6	−3	−2	−4	−1	−4	−4	−3	−1	−3	−4	−3

TABLE XVII.—*Comparison of the monthly mean relative humidity data of 1901 with the averages of past years*—concld.

METEOROLOGICAL PROVINCE.	STATION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	YEAR.
SOUTH INDIA	Salem	−5	+3	+1	+1	+1	−5	0	−2	+2	−2	0	−1	0
	Chitaldroog	+7	+19	+4	+6	+4	+1	+6	+6	+5	+3	+2	+7	+6
	Bangalore	−1	+13	−2	0	+1	−1	−1	−3	−2	−1	−3	+2	0
	Hassan	+2	+10	−7	−8	−2	−3	+3	+1	−2	+1	−1	0	−1
	Mysore	−5	+8	0	−4	+3	0	0	−4	0	+3	+3	+5	+1
	Madras	+5	+1	+2	+2	0	−3	−1	+2	+5	0	+4	+2	+2
	Bellary	−5	+10	+2	−4	−3	−7	−7	−6	−10	−11	−2	−5	−4
HILL STATION, BALUCHISTAN.	Quetta	+15	−6	−4	+1	+8	−1	−3	−4	−7	+2	−3	−2	0
HILL STATIONS NORTHERN INDIA.	Leh	−27	−30	−26	−1	−3	−2	+2	+2	+2	−6	+6	−23?	−9?
	Srinagar	+6	+7	+8	+14	+14	+10	+3	+4	+3	+5	0	+1	+6
	Kailang	+6	+7	+1	+4	+2	+1	+2	+3	0	−8	−6	−3	0
	Simla (Ridge)	+15	+14	+6	−9	−1	−19	−12	+3	−3	−6	−3	−3	−2
	Chakrata	+12	+9	+4	−5	+4	−17	−6	+4	−3	0	−10	−5	−1
	Ranikhet	+9	+2	+2	−9	−6	−21	−4	+3	−5	+1	−2	−3	−3
	Katmandu	+5	+2	+2	−8	−3	−2	+1	+1	0	−1	−3	−3	0
	Darjeeling	+8	−5	+3	−9	−4	−2	−2	−1	−1	+4	−5	?	?
HILL STATIONS, CENTRAL INDIA.	Mount Abu	+8	−3	−3	−7	−2	−7	−7	+1	−13	−4	−12	−6	−5
	Pachmarhi	+12	+5	+8	+5	−2	−7	+1	+5	−4	−5	−5	−9	0
	Chikalda	+8	−1	+4	+6	+2	−13	−1	+3	−8	−6	−9	−11	−2
HILL STATION, SOUTHERN INDIA.	Wellington	+3	+14	−3	+3	+2	−1	−1	−1	+4	−4	−1	−9	+1
EXTRA INDIAN STATIONS.	Aden	−2	−7	−7	−4	−4	0	−7	−1	−4	+2	0	−4	−3
	Perim	+6	+1	+6	+15	+11	+11	+9	+9	+9	+9	+12	+18	+10
	Zanzibar	−2	+5	−3	+1	+2	−3	+1	−2	0	−1	0	0	0
	Port Victoria (Seychelles)	+1	+4	+3	+5	+4	+3	+7	+3	+4	+3	−1	+2	+3
	Mauritius (Pamplemouses).	−2	0	+2	+1	−1	0	+2	0	−1	+1	+1	+3	+1

TABLE XVIII.—*Geographical summary of the aqueous vapour pressure data of Table II in the monthly weather reviews of 1901.*

METEOROLOGICAL AREA.	Number of stations.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	YEAR.
		"	"	"	"	"	"	"	"	"	"	"	"	"
North-West Himalaya	6	−·005	0	+·010	−·021	+·009	−·054	−·015	+·037	−·017	+·028	+·008	−·012	−·003
Sikkim Himalaya and Nepal	1−2	+·001	+·013	+·014	−·034	−·018	+·008	+·052	+·035	−·002	+·041	+·008	−·005	+·009

TABLE XVIII.—*Geographical summary of the aqueous vapour pressure data of Table II in the monthly weather reviews of 1901*—concld.

METEOROLOGICAL AREA.	Number of stations.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	Decsmber.	YEAR.
		"	"	"	"	"	"	"	"	"	"	"	"	"
Punjab Plains	3	+·026	+·020	+·054	—·031	+·002	—·100	—·045	+·034	—·059	+·030	+·028	- ·020	—·005
Gangetic Plain	5	+·023	+·029	+·027	—·043	—·024	—·139	—·026	+·036	—·042	+·031	—·004	—·026	—·013
Western Rajputana	4	+·020	—·032	—·010	—·073	+·015	+·008	+·012	+·032	—·057	+·039	—·019	+·005	—·005
Eastern Rajputana and Central India	1	+·011	+·016	+·009	—·055	—·034	—·135	—·060	+·026	—·119	+·040	+·014	—·017	—·026
Nerbudda Valley	1	+·033	—·058	+·057	—·009	—·004	—·019	+·013	+·018	—·041	—·035	—·036	—·058	—·012
Chota Nagpur	1	+·043	+·112	+·038	—·001	—·007	—·099	—·034	—·013	—·069	+·016	+·004	—·001	—·001
Lower Bengal	2	—·022	+·003	—·091	—·016	—·030	+·023	+·001	—·007	—·013	+·033	+·005	—·013	—·011
Orissa	1	+·004	—·009	—·041	+·029	+·004	+·028	+·030	+·020	+·005	+·064	+·044	—·006	+·014
Central Provinces (South) and Berar	4—5	+·036	—·005	+·055	+·067	+·019	—·021	+·014	+·020	—·029	—·024	—·046	—·065	+·002
Konkan	2	+·013	—·079	—·004	+·017	—·021	—·014	+·002	+·002	+·004	+·013	—·003	—·016	—·007
Deccan, Hyderabad and Mysore	8—9	+·034	+·076	+·008	+·012	+·019	+·001	+·014	+·007	+·002	—·003	+·002	—·008	+·014
East Coast and Carnatic	2	+·065	+·092	—·007	+·015	+·023	+·019	+·012	+·022	+·065	+·030	+·045	+·001	+·032
Arakan and Pegu	3—4	0	+·042	—·037	—·003	—·010	+·019	+·002	—·003	+·026	+·029	+·032	—·007	+·008
Bay Islands	2	+·045	+·074	+·019	+·024	—·004	+·001	+·008	+·008	+·028	—·002	+·020	—·032	+·016
Extra-Tropical India	25—26	+·011	+·007	+·009	—·033	—·005	—·056	—·010	+·028	—·037	+·031	+·003	—·014	—·006
Tropical India	23—25	+·029	+·045	+·010	+·021	+·010	—·001	+·010	+·009	+·009	+·003	+·001	—·022	+·010
Whole India	49—51	+·019	+·025	+·009	—·007	+·002	—·029	0	+·019	—·015	+·017	+·002	—·018	+·002

TABLE XIX.—*Geographical summary of the humidity data of Table II in the monthly weather reviews of 1901.*

METEOROLOGICAL AREA.	Number of stations.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	YEAR.
North-West Himalaya	6	+4	+2	—1	—1	+2	—8	—3	—3	—1	—2	—3	—6	—2
Sikkim Himalaya and Nepal	1—2	+7	—2	+3	—9	—4	—2	—1	0	—1	—2	—4	—3	—2
Punjab Plains	3	+9	+5	+5	—1	+2	—8	—3	—2	—5	—1	+1	—5	0
Gangetic Plain	5	+9	+5	+4	—3	—2	—16	—6	+3	—4	—1	—3	—5	—2
Western Rajputana	4	+7	—1	—4	—9	0	—5	—5	+2	—7	—1	—7	—2	—3
Eastern Rajputana and Central India	1	+8	+6	—1	—6	—5	—16	—12	—1	—16	—3	—5	—8	—5
Nerbudda Valley	1	+8	—5	+3	—2	—3	—8	—2	+2	—9	—11	—8	—11	—3
Chota Nagpur	1	+15	+21	+6	—1	0	—21	—8	—3	—10	—4	—1	—3	—1
Lower Bengal	2	—1	+1	—10	—4	—5	—4	—2	—3	—3	—3	+1	—3	—3

TABLE XIX.—*Geographical summary of the humidity data of Table II in the monthly weather reviews of 1901*—concld.

METEOROLOGICAL AREA.	Number of stations.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	YEAR.
Orissa	1	0	−1	−6	0	−4	−5	0	+1	−2	+1	+5	−3	−1
Central Provinces (South) and Berar	4−5	+8	+2	+7	+7	+1	−8	−1	+5	−6	−6	−7	−10	−1
Konkan	2	0	−8	−3	−2	−5	−1	−2	−2	−4	+1	−5	−5	−3
Deccan, Hyderabad and Mysore	8−9	0	+9	+1	+1	+3	−1	+1	0	−3	−1	−1	0	+1
East Coast and Carnatic	2	0	+2	+2	+2	+1	−4	−1	0	+4	−1	+2	+1	+1
Arakan and Pegu	3−4	−4	−1	−7	−1	−1	−2	−1	+1	−1	+2	0	+1	−1
Bay Islands	1−2	−1	+1	−3	−3	−2	−2	−1	−2	−3	0	+2	−4	−2
Extra-Tropical India	25−26	+6	+3	0	−4	−1	−9	−4	+1	−4	−2	−3	−5	−2
Tropical India	22−25	+3	+4	+1	+2	+1	−3	0	+1	−3	−1	−2	−3	0
Whole India	48−51	+4	+3	0	−1	0	−6	−2	+1	−4	−2	−2	−4	−1

TABLE XX.—*Variations of the mean monthly aqueous vapour pressure from the normal in nine meteorological provinces of India in 1901.*

METEOROLOGICAL PROVINCE.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	YEAR.
	"	"	"	"	"	"	"	"	"	"	"	"	"
Burma Coast and Bay Islands.	+·033	+·079	+·009	+·011	−·001	+·008	+·007	+·002	+·029	+·017	+·031	−·019	+·017
Bengal and Orissa	−·019	−·010	−·073	−·003	−·022	+·028	+·007	+·005	−·002	+·038	·031	−·007	−·003
Gangetic Plain and Chota Nagpur.	+·032	+·077	+·026	−·021	−·018	−·082	−·012	+·010	−·045	+·029	−·006	−·017	−·002
Upper Sub-Himalayas	+·026	+·016	+·042	−·040	−·014	−·153	−·046	+·045	−·062	+·013	+·010	−·026	−·016
North-West Fontier, Indus Valley and North-West Rajputana.	+·026	−·002	+·022	−·056	+·030	0	+·020	+·032	−·005	+·067	+·030	+·015	+·015
East Rajputana, Central India and Gujarat.	+·003	−·030	−·029	−·087	−·032	−·090	−·050	+·027	−·134	+·026	−·036	−·023	−·038
Deccan	+·031	+·001	+·042	+·040	+·026	−·009	+·014	+·020	−·029	−·027	−·037	−·048	+·002
West Coast	+·013	−·079	−·004	+·017	−·021	−·014	+·002	+·002	+·004	+·013	−·003	−·016	−·007
South India	+·050	+·113	−·002	+·003	+·008	−·003	+·010	+·005	+·029	+·012	+·012	0	+·020

TABLE XXI.—*Variations of the mean monthly relative humidity from the normal in nine meteorological provinces of India in 1901.*

METEOROLOGICAL PROVINCE.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	YEAR.
Burma Coast and Bay Islands	−2	+2	−3	−3	0	−2	0	0	−2	+1	0	−1	−1
Bengal and Orissa	−1	−2	−9	−2	−5	−4	−2	−2	−2	−1	+2	−2	−3
Gangetic Plain and Chota Nagpur	+11	+12	+4	−3	−1	−14	−6	−1	−6	−4	−4	−5	−1
Upper Sub-Himalayas	+10	+5	+5	−2	0	−15	−5	+3	−5	−1	0	−5	−1
North-West Frontier, Indus Valley and North-West Rajputana	+6	+2	−1	−7	+1	−4	−2	−2	0	+3	0	0	0
East Rajputana, Central India and Gujarat	+6	+1	−3	−7	−2	−11	−12	−1	−17	−4	−10	−8	−6
Deccan	+5	+3	+5	+5	+3	−4	0	+4	−7	−6	−5	−7	0
West Coast	0	−8	−3	−2	−5	−1	−2	−2	−4	+1	−5	−5	−3
South India	0	+9	0	−1	+1	−3	0	−1	0	−1	0	+1	0

I.—The cold weather period.—During the first three weeks of January and throughout February the weather was unusually unsettled, cold and rainy over the greater part of the Indian region, and consequently the vapour pressure and humidity were in general excess. In January the excess was considerable over the whole of Northern India, and was most marked in the Gangetic Plain and Chota Nagpur. In February the excess was mainly confined to the upper submontane regions, West Bengal and the greater part of the Peninsula. The following gives data :—

AREA.	VARIATION OF MEAN ABSOLUTE HUMIDITY FROM NORMAL IN			VARIATION OF MEAN RELATIVE HUMIDITY FROM NORMAL IN		
	January.	February.	Period, January and February.	January.	February.	Period, January and February.
	"	"	"			
Burma Coast	+·018	+·082	+·050	−4	+3	0
Bengal	−·026	−·011	−·018	−2	−3	−2
Orissa	+·004	−·009	−·002	0	−1	0
Bihar	+·019	+·063	+·041	+8	+8	+8
Chota Nagpur	+·043	+·112	+·078	+15	+21	+18
United Provinces of Agra and Oudh	+·024	+·021	+·022	+10	+4	+7
Punjab	+·026	+·020	+·023	+9	+5	+7
Sind	+·037	−·007	+·015	+7	+3	+5
Rajputana	+·003	−·030	−·013	+6	+1	+3
Central Provinces	+·051	+·010	+·030	+9	+4	+6
Berar	+·031	−·043	−·006	+7	−3	+2
Bombay Coast	+·013	−·079	−·033	0	−8	−4
Bombay Deccan	+·019	+·001	+·010	+3	+5	+4
Madras Coast	+·107	+·095	+·101	+5	+1	+3
Madras Deccan	+·019	+·085	+·046	−4	+10	+2
Mysore	+·055	+·128	+·104	+1	+13	+7
South India	+·022	+·088	+·055	−5	+3	−1

The relative humidity was most largely above the normal in the areas represented by the following stations :—

STATION.	VARIATION OF MEAN ABSOLUTE HUMIDITY FROM NORMAL IN			VARIATION OF MEAN RELATIVE HUMIDITY FROM NORMAL IN		
	January.	February.	Period, January and February.	January.	February.	Period, January and February.
	"	"	"			
Hazaribagh	+·043	+·112	+·077	+15	+21	+18
Allahabad	+·035	+·055	+·045	+11	+8	+9

Station.	Variation of mean absolute humidity from normal in			Variation of mean relative humidity from normal in		
	January.	February.	Period, January and February.	January.	February.	Period, January and February.
	"	"	"			
Meerut	+·026	+·028	+·027	+10	+7	+8
Lahore	+·036	+·037	+·036	+13	+10	+11
Jaipur	+·011	+·016	+·013	+8	+6	+7
Nagpur	+·068	+·077	+·072	+9	+12	+10
Chitaldroog	+·123	+·183	+·153	+7	+19	+13

The air was somewhat drier than usual in the centre and south of the Peninsula and in Burma in January, and in Upper Burma and Gujarat in February. The variations from normal in these areas were, however, generally small.

The variations from the normal at the hill stations in Upper India were positive and were generally moderate to considerable. The following gives data:—

Station.	Variation of mean absolute humidity from normal in			Variation of mean relative humidity from normal in		
	January.	February.	Period, January and February.	January.	February.	Period, January and Fbruary.
	"	"	"			
Srinagar	+·016	+·034	+·025	+6	+7	+6
Kailang	—·012	+·004	—·004	+6	+7	+6
Simla	+·006	+·006	+·006	+15	+14	+14
Chakrata	+·007	+·005	+·006	+12	+9	+10
Ranikhet	—·008	—·002	—·005	+9	+2	+5
Katmandu	+·008	+·014	+·011	+5	+2	+3

At Leh, however, the air was considerably drier than usual. The following gives data:—

Station.	Variation of mean absolute humidity from normal in			Variation of mean relative humidity from normal in		
	January.	February.	Period, January and February.	January.	February.	Period, January and February.
	"	"				
Leh	—·041	—·046	—·043	—27	—30	—28

Unusually low humidities were reported during the period. The following below 9 may be noted:—

Station.	Date.	Hour.	Lowest humidity recorded during January and February.
			%
Leh	3rd January	10 A.M. & 4 P.M.	0
	4th ,,	4 P.M.	0
	5th ,,	10 A.M. & 4 P.M.	0
	6th ,,	10 A.M.	0
	10th ,,	10 A.M. & 4 P.M.	0
	11th ,,	4 P.M.	0
	16th ,,	10 A.M. & 4 P.M.	0
	17th ,,	10 A.M.	0
	22nd ,,	,,	0
	24th ,,	10 A.M. & 4 P.M.	0
	29th ,,	10 A.M.	0
	30th ,,	,,	0
	31st ,,	,,	0
Kodaikanal	2nd February	8 A.M.	5
Leh	4th ,,	,,	0
Poona	8th ,,	4 P.M.	8
Leh	,, ,,	10 A.M.	0
,,	9th ,,	10 A.M. & 4 P.M.	0
,,	10th ,,	,, ,,	0
Poona	12th ,,	4 P.M.	4
Leh	,, ,,	,,	0
,,	13th ,,	,,	0
Poona	,, ,,	,,	6
Deesa	,, ,,	,,	8
,,	14th ,,	,,	8
Poona	,, ,,	,,	4
Leh	,, ,,	10 A.M.	0
Poona	15th ,,	4 P.M.	6
Jamnagar	16th ,,	,,	7
Deesa	,, ,,	,,	8
Poona	22nd ,,	,,	5
Buldana	,, ,,	,,	5
Poona	23rd ,,	10 A.M.	7
Deesa	24th ,,	4 P.M.	5
Leh	25th ,,	,,	0
,,	26th ,,	10 A.M. & 4 P.M.	0

Station.	Date.	Hour.	Lowest humidity recorded during January and February.
			%
Deesa	26th February	4 P.M.	6
Udaipur	" "	"	8
Deesa	27th "	"	6
Jamnagar	28th "	"	6

II.—The hot weather period.—The variations of the humidity from normal were well marked in March and April, but only slightly marked in May. In the former two months the humidity was in moderate to considerable excess over the head of the Peninsula, while it was in more or less marked defect in Bengal and Burma on the east, and in East Rajputana, Central India and Gujarat and the Indus Valley and North-West Rajputana on the west. In May the only variation from normal calling for special remark was the slight excess shown in the Deccan.

The following data illustrate these features :—

Meteorological Province.	Variation of mean absolute humidity from normal in				Variation of mean relative humidity from normal in			
	March.	April.	May.	Period, March to May.	March.	April.	May.	Period, March to May.
	"	"	"	"				
Burma Coast and Bay Islands	+·009	+·011	—·001	+·006	—3	—3	0	—2
Bengal and Orissa	—·078	—·093	—·022	—·034	—9	—2	—5	—5
Gangetic Plain and Chota Nagpur	+·026	—·021	—·018	—·004	+4	—3	—1	0
Indus Valley and North-West Rajputana	+·022	—·056	+·030	—·001	—1	—7	+1	—2
East Rajputana, Central India and Gujarat	—·029	—·087	—·032	—·049	—3	—7	—2	—4
Deccan	+·042	+·040	+·036	+·036	+5	+5	+3	+4
West Coast	—·004	+·017	—·021	—·003	—3	—2	—5	—3

The following data indicate the decreased humidities obtaining in Bengal and Burma :—

Station.	Variation of mean absolute humidity from normal in				Variation of mean relative humidity from normal in			
	Mar.	Apl.	May.	Period, Mar. to May.	Mar.	Apl.	May.	Period, Mar. to May.
	"	"	"	"				
Rangoon	—·015	—·011	+·001	—·008	—4	—3	+1	—2
Diamond Island	—·006	+·008	+·001	+·001	—4	—2	+3	—1
Chittagong	—·090	—·007	—·032	—·043	—12	+1	—7	—6
Calcutta	—·105	—·038	—·048	—·064	—12	—7	—6	—8

The following data illustrate the decreased humidities obtaining in Sind, Rajputana and the West Coast :—

Station.	Variation of mean absolute humidity from normal in				Variation of mean relative humidity from normal in			
	Mar.	Apl.	May.	Period, Mar. to May.	Mar.	Apl.	May.	Period, Mar. to May.
	"	"	"	"				
Jaipur	+·009	—·055	—·034	—·027	—1	—6	—5	—4
Kurrachee	—·014	—·074	+·009	—·026	—6	—14	—3	—8
Deesa	—·066	—·118	—·029	—·071	—5	—8	+1	—4
Bombay	—·010	+·012	—·007	—·002	—2	—2	—5	—3
Karwar	+·002	+·021	—·035	—·004	—3	—2	—4	—3

The following data illustrate the increased humidities obtaining in the Deccan and over the head of the Peninsula :—

Station.	Variation of mean absolute humidity from normal in				Variation of mean relative humidity from normal in			
	Mar.	Apl.	May.	Period, Mar. to May.	Mar.	Apl.	May.	Period, Mar. to May.
	"	"	"	"				
Belgaum	+·008	+·042	+·032	+·027	+3	+7	+7	+6
Sholapur	+·043	+·074	+·038	+·052	+3	+8	+4	+5
Nagpur	+·139	+·157	+·029	+·108	+15	+14	+3	+11
Chitaldroog	+·078	+·118	+·056	+·084	+4	+6	+4	+5

At Leh the air was drier, and at Srinagar considerably damper than usual. At the Upper India hill stations the variations were irregular, but generally positive in March

and negative in April and irregular in May. The following gives data:—

Station.	Variation of mean absolute humidity from normal in				Variation of mean relative humidity from normal in			
	Mar.	Apl.	May.	Period, Mar. to May.	Mar.	Apl.	May.	Period, Mar. to May.
	"	"	"					
Leh	—·041	—·004	—·014	—·020	—26	—1	—3	—10
Srinagar	+·079	+·049	+·090	+·073	+8	+14	+14	+12
Kailang	—·005	—·012	+·006	—·004	+1	+4	+2	+2
Simla	+·013	—·067	—·024	—·026	+6	—9	—1	—1
Chakrata	+·014	—·035	+·023	+·001	+4	—5	+4	+1
Ranikhet	+·002	—·054	—·029	—·027	+2	—9	—6	—4

The driest periods during the hot weather of 1901 were from the 14th to the 19th March, the 10th to the 18th April and the 19th to the 25th May. The following humidities of 3 or under were recorded during these periods:—

Station.	March 1901.			April 1901.			May 1901.		
	Date.	Hour.	Lowest humidity.	Date.	Hour.	Lowest humidity.	Date.	Hour.	Lowest humidity.
			%			%			%
Deesa	15th	4 P.M.	1	17th	10A.M.	3			
				18th	"	2			
				17th	4 P.M.	0			
				18th	"	3			
Leh	19th	From	0	10th	10A.M. and 4 P.M.	0	19th	10A.M.	0
	1st	mini-	0						
	14th	ma 4 P.M.	0						
	17th	"	0						
	16th	"	2						
Roorkee							24th	4 P.M.	2
Montgomery							25th	8 A.M.	0

III.—The south-west monsoon period.—The variations in the humidity conditions of the period were determined by the variations in the strength and rain-giving capacity of the monsoon currents. The following are the more important features: —

In consequence of the lateness of the advance of the monsoon currents, the air was very much drier than usual in June over practically the whole Indian region, and in July over the greater part of India north of Lat. 20° N.

The following gives data in illustration:—

Meteorological Province.	Variation of mean absolute humidity from normal in			Variation of mean relative humidity from normal in		
	June.	July.	Period, June and July.	June.	July.	Period, June and July.
	"	"	"			
Bengal and Orissa	+·028	+·007	+·017	—4	—2	—3
Gangetic Plain and Chota Nagpur.	—·082	—·012	—·047	—14	—6	—10
Upper Sub-Himalayas	—1·53	—·046	—·099	—15	—5	—10
North-West Frontier, Indus Valley and North-West Rajputana.	0	+·020	+·010	—4	—2	—3
East Rajputana, Central India and Gujarat.	—·090	—·050	—·070	—11	—12	—11
Deccan	—·009	+·014	+·002	—4	0	—2
West Coast	—·014	+·002	—·006	—1	—2	—2
South India	—·003	+·010	+·004	—3	0	—2

The deficiency was most marked at the following stations in these areas:—

Station.	Variation of mean absolute humidity from normal in			Variation of mean relative humidity from normal in		
	June.	July.	Period, June and July.	June.	July.	Period, June and July.
	"	"	"			
Calcutta	+·008	+·001	+·004	—6	—2	—4
Hazaribagh	—·099	—·034	—·066	—21	—8	—15
Allahabad	—·156	—·008	—·082	—21	—10	—15
Dehra Dun	—·184	—·045	—·114	—24	—8	—16
Roorkee	—·165	—·060	—·112	—16	—8	—12
Meerut	—·201	—·024	—·112	—19	—4	—11
Ludhiana	—·111	—·046	—·078	—12	—3	—7
Jaipur	—·135	—·060	—·097	—16	—12	—14
Deesa	—·045	—·039	—·042	—6	—12	—9
Buldana	—·048	—·002	—·025	—8	—2	—5
Khandwa	—·019	+·013	—·003	—8	—2	—5
Nagpur	—·041	0	—·020	—8	—2	—5

In other parts of India the variations from normal were inconsiderable. The following gives data in illustration:—

Station.	Variation of mean absolute humidity from normal in			Variation of mean relative humidity from normal in		
	June.	July.	Period, June and July.	June.	July.	Period, June and July.
	"	"	"			
Rangoon	+·015	+·012	+·013	—2	0	—1
Cocos Island	+·001	—·003	—·001	—1	—1	—1
Darbhanga	+·010	+·007	+·008	—1	—1	—1

Station.	Variation of mean absolute humidity from normal in			Variation of mean relative humidity from normal in		
	June.	July.	Period, June and July.	June.	July.	Period, June and July.
	"	"	"			
Jacobabad . .	+·079	+·086	+·082	—1	+2	0
Bombay . . .	—·010	+·007	—·001	—1	0	0
Poona . . .	—·002	+·024	+·011	—1	+1	0
Belgaum . . .	+·013	+·017	+·015	+2	+1	+1
Sholapur . . .	+·027	+·027	+·027	—1	+2	+2
Hyderabad (Deccan) .	+·004	+·011	+·007	—1	+3	+1
Bangalore . . .	—·009	—·006	—·007	—1	—1	—1
Madras . . .	+·015	+·011	+·013	—3	—1	—2

In August the monsoon currents were of about normal strength, but were unusually weak in September. In August, consequently, the humidity conditions were practically normal everywhere, but in September the air was much drier than usual over the greater part of India, the defect from normal being greatest in East Rajputana, Central India and Gujarat. The following gives data in illustration:—

Meteorological Province.	Variation of mean absolute humidity from normal in			Variation of mean relative humidity from normal in		
	August.	September.	Period, August and September.	August.	September.	Period, August and September.
	"	"	"			
Burma Coast and Bay Islands.	+·002	+·029	+·015	0	—2	—1
Bengal and Orissa .	+·005	—·002	+·001	—2	—2	—2
Gangetic Plain and Chota Nagpur.	+·010	—·045	—·017	—1	—6	—3
Upper Sub-Himalayas.	+·045	—·062	—·008	+3	—5	—1
North-West Frontier, Indus Valley and North-West Rajputana.	+·032	—·005	+·013	—2	0	—1
East Rajputana, Central India and Gujarat.	+·027	—·134	—·053	—1	—17	—9
Deccan . . .	+·020	—·029	—·004	+4	—7	—1
West Coast . .	+·002	+·004	+·003	—2	—4	—3
South India . .	+·005	+·029	+·017	—1	0	0

The variations from normal were greatest at the stations for which data are given below:—

Station.	Variation of mean absolute humidity from normal in			Variation of mean relative humidity from normal in		
	August.	September.	Period, August and September.	August.	September.	Period, August and September.
	"	"	"			
Hazaribagh . .	—·013	—·069	—·041	—3	—10	—6
Meerut . . .	+·071	—·076	—·002	+7	—8	0
Ludhiana . . .	+·036	—·083	—·023	—1	—8	—4
Jaipur . . .	+·026	—·119	—·046	—1	—16	—8
Deesa . . .	+·028	—·148	—·060	0	—17	—8
Khandwa . . .	+·018	—·041	—·011	+2	—9	—3
Sholapur . . .	+·028	—·056	—·014	+4	—10	—3
Bellary . . .	—·061	—·076	—·068	—6	—10	—8

The variations from normal were slight during the period in Burma, the Indus Valley and North-West Rajputana, and in South India. The following gives data:—

Meteorological Province.	Variation of mean absolute humidity from normal in			Variation of mean relative humidity from normal in		
	August.	September.	Period, August and September.	August.	September.	Period, August and September.
	"	"	"			
Burma Coast and Bay Islands.	+·002	+·029	+·015	0	—2	—1
North-West Frontier, Indus Valley and North-West Rajputana.	+·032	—·005	+·013	—2	0	—1
South India . .	+·005	+·029	+·017	—1	0	0

The following gives data for representative stations in these areas:—

Station.	Variation of mean absolute humidity from normal in			Variation of mean relative humidity from normal in		
	August.	September.	Period, August and September.	August.	September.	Period, August and September.
	"	"	"			
Port Blair . .	+·017	+·028	+·022	—1	—2	—1
Rangoon . .	0	+·013	+·006	+1	—3	—1

Station.	Variation of mean absolute humidity from normal in			Variation of mean relative humidity from normal in		
	August.	September.	Period, August and September.	August.	September.	Period, August and September.
	"	"	"			
Chittagong	+·012	+·015	+·013	—2	0	—1
Peshawar	+·016	—·007	+·004	—7	0	—3
Jacobabad	+·063	+·037	+·050	+1	+4	+2
Kurrachee	+·016	—·046	—·015	0	—3	—1
Salem	+·004	+·049	+·026	—2	+2	0
Hassan	+·022	+·017	+·019	+1	—2	0
Chitaldroog	+·060	+·087	+·073	+6	+5	+5
Madras	+·040	+·080	+·060	+2	+5	+3

At the Upper India hill stations the humidity was in slight excess in August and in slight defect in September. In Kashmir and Ladakh the humidity was excessive in both months. The following gives data :—

Station.	Variation of mean absolute humidity from normal in			Variation of mean relative humidity from normal in		
	August.	September.	Period, August and September.	August.	September.	Period, August and September.
	"	"	"			
Leh	+·025	+·005	+·015	+2	+2	+2
Srinagar	+·117	+·041	+·079	+4	+3	+3
Simla	+·009	—·058	—·024	+3	—3	0
Chakrata	+·011	—·042	—·015	+4	—3	0
Ranikhet	+·023	—·034	—·005	+3	—5	—1
Katmandu	+·042	—·007	+·017	+1	0	0

IV.—The retreating south-west monsoon period.—Throughout this period humidity conditions were approximately normal over Burma, except Arakan, the coast districts of the Peninsula, and in the Indus Valley and North-West Punjab, but were slightly to moderately abnormal in the interior of the country, where the air was drier than usual. The following gives data for stations in the areas where conditions were practically normal :—

Station.	Variation of mean absolute humidity from normal in				Variation of mean relative humidity from normal in			
	October.	November.	December.	Period, October to December.	October.	November.	December.	Period, October to December.
	"	"	"	"				
Cocos Island	+·001	+·047	—·023	+·008	0	+1	—2	0
Rangoon	—·026	+·007	—·045	—·021	+1	—4	—2	—2

Station.	Variation of mean absolute humidity from normal in				Variation of mean relative humidity from normal in			
	October.	November.	December.	Period, October to December.	October.	November.	December.	Period, October to December.
	"	"	"	"				
Chittagong	+·021	+·012	+·003	+·012	+1	+2	+2	+2
Saugor Island	+·033	+·008	—·020	+·007	—1	+2	—2	0
Madras	+·046	—·046	—·001	0	0	+4	+2	+2
Salem	+·014	+·044	+·002	+·020	—2	0	—1	—1
Hassan	+·009	+·008	—·023	—·002	+1	—1	0	0
Karwar	—·004	+·020	—·012	+·001	—1	—3	—4	—3
Belgaum	+·014	+·021	+·013	+·016	+2	+2	+3	+2
Kurrachee	+·080	+·020	+·035	+·045	+4	—4	+1	0
Peshawar	+·071	+·031	—·012	+·030	+4	+1	—5	0
Lahore	+·001	+·013	—·013	0	—2	+1	—2	—1
Roorkee	+·030	+·001	—·022	+·003	+3	0	—2	0

The following gives data for the drier districts in the interior :—

Station.	Variation of mean absolute humidity from normal in				Variation of mean relative humidity from normal in			
	October.	November.	December.	Period, October to December.	October.	November.	December.	Period, October to December.
	"	"	"	"				
Darbhanga	+·022	—·008	—·032	—·006	—6	—4	—7	—6
Allahabad	+·048	—·013	—·018	+·006	—3	—6	—5	—5
Jaipur	+·040	+·014	—·017	+·012	—3	—5	—8	—5
Deesa	+·011	—·085	—·028	—·034	—5	—14	—8	—9
Buldana	—·040	—·071	—·082	—·064	—8	—9	—13	—10
Khandwa	—·035	—·036	—·058	—·043	—11	—8	—11	—10
Nagpur	—·032	—·055	—·071	—·053	—7	—5	—9	—7
Sholapur	—·075	—·038	—·042	—·052	—12	—8	—8	—9
Bellary	—·076	0	—·042	—·039	—11	—2	—5	—6

During October the areas of greatest dryness were the Deccan and the west of the Central Provinces, where fine weather held practically throughout the month. In these areas not only was the temperature higher than usual, the amount of vapour in the air was also unusually low, and the percentage humidity was consequently in considerable defect.

In November the area of greatest dryness lay over Khandesh and Gujarat, and in December over Berar and the west of the Central Provinces, in both of which areas, during November and December, the rainfall was unusually scanty.

Throughout the period the air was much drier than usual at the hill stations of Upper India and in Ladakh. The following gives data:—

Station.	Variation of mean absolute humidity from normal in				Variation of mean relative humidity from normal in			
	October.	November.	December.	Period, October to December.	October.	November.	December.	Period, October to December.
	"	"	"					
Leh	—·007	+·024	—·036	—·006	—6	+6	—23?	—8?
Srinagar	+·123	+·049	+·018	+·063	+5	0	+1	+2
Kailang	+·007	—·006	—·001	0	—8	—6	—3	—6
Simla	—·020	—·007	—·021	—·016	—6	—3	—3	—4
Chakrata	+·027	—·019	—·015	—·002	0	—10	—5	—5
Ranikhet	+·040	+·005	—·017	+·009	+1	—2	—3	—1

The year.—The following are the more important features of the mean humidity conditions during the year 1901 in India:—

(1) On the mean of the year the humidity of the whole of India was only in very slight defect, a consequence solely of the unusually high temperatures of the year, for the vapour pressure was in excess by + ·002″.

(2) In Extra-Tropical India, however, the humidity was slight defect in consequence of unusually low vapour pressures in that region.

(3) In Tropical India, on the other hand, the amount of vapour in the air was unusually large, but the excessive temperatures prevailing in that region sufficed to reduce the humidity to normal.

(4) On the mean of the year the air was driest over the areas indicated by the stations for which data are given below:—

Station.	Mean variation from normal in 1901 of	
	Absolute humidity.	Relative humidity.
	"	
Jaipur	—·026	—5
Deesa	—·050	—6
Mount Abu	—·016	—5
Buldana	—·028	—3
Khandwa	—·012	—3
Bombay	—·013	—3
Karwar	—·002	—3
Bellary	—·036	—4

The following gives the mean annual variations of the mean aqueous vapour pressure and humidity of the whole of India from the normal for each year from 1875 to 1901:—

Year.	Annual variation of pressure of vapour.	Annual variation of relative humidity.
	"	
1875	—·004	+1
1876	—·017	—1
1877	+·011	+1
1878	+·020	0
1879	—·014	—1
1880	—·004	0
1881	+·001	0
1882	—·008	0
1883	—·013	—1
1884	—·012	0
1885	+·001	0
1886	+·008	+1
1887	—·012	—1
1888	—·005	—1
1889	+·003	—1
1890	—·003	—1
1891	—·007	0
1892	—·002	—1
1893	+·007	+3
1894	+·013	+2
1895	+·003	0
1896	—·010	—3
1897	+·005	—1
1898	—·008	—2
1899	—·026	—5
1900	+·002	—2
1901	+·002	—1

Cloud.

Normal values of the mean monthly and annual amount of cloud at second class stations, obtained from the whole of the available data up to the end of the year 1896, were given in Table XXI of the Annual Summary of 1896. These means are the arithmetical averages of the cloud amounts as registered at 10 A.M. and 4 P.M., and hence represent the mean amount during the day period rather than of the whole 24 hours. Corrections to reduce these means to true daily means have only been obtained in the case of a few stations.

Variation data of this element of meteorological observation for the year 1901 are given in Tables XXII, XXIII and XXIV. Table XXIII gives the mean variation data for the sixteen meteorological areas adopted in the geographical summaries of meteorological data in the Annual Reports previous to 1891, and Table XXIV gives similar data for nine meteorological provinces of India.

TABLE XXII.—*Comparison of the mean cloud proportion in each month of 1901 with the averages of past years.*

Meteorological Province.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
Burma Coast and Bay Islands.	Port Blair	+0·4	+1·2	+0·3	+0·6	+0·6	+0·4	+0·2	+0·2	0	+1·3	+1·7	−0·8	+0·5
	Rangoon	+1·3	+1·0	+0·5	−1·3	0	+0·7	+0·6	+0·9	+0·5	+2·4	+1·7	+1·4	+0·8
	Diamond Island	−1·0	−0·2	−2·0	−1·8	+1·0	+0·3	+0·8	+0·7	−0·5	+1·2	−0·1	−0·8	−0·2
	Cocos Island	−0·5	−0·4	−0·8	−1·4	+0·3	+0·2	+0·5	+0·2	−0·7	+1·8	+0·8	+0·7	+0·1
	Akyab	+0·3	+0·8	+1·1	+0·7	−0·1	+0·8	−0·4	+0·3	−1·3	−0·5	+0·1	−0·9	+0·1
Bengal and Orissa	Chittagong	+0·6	−0·2	−1·1	+1·6	−0·5	+0·8	0	+0·7	+0·1	+0·5	+0·9	+0·4	+0·3
	Calcutta (Alipore)	+1·6	+1·6	−0·8	+1·7	−0·9	−0·6	+0·1	+0·1	−0·8	−0·4	+1·2	+0·7	+0·3
	Saugor Island	+1·4	+0·6	−1·6	+0·9	−1·2	−0·5	+0·2	+0·3	−0·2	+0·2	+1·3	+1·3	+0·2
	False Point	+1·4	+0·6	−0·2	+1·6	−1·1	−0·7	+0·5	+0·8	+0·1	+0·7	+1·3	−0·5	+0·4
Gangetic Plain and Chota Nagpur	Hazaribagh	+3·0	+3·7	−0·5	+2·2	+0·7	−0·6	+0·2	+0·8	−1·3	−0·1	+0·5	+1·0	+0·8
	Darbhanga	+1·2	+1·8	−0·8	0	−0·4	−0·7	+0·3	0	−1·6	−1·8	+0·2	−0·2	−0·2
	Allahabad	+2·5	+2·0	−0·6	+2·1	−0·8	−2·7	−0·7	+1·0	−0·6	−0·4	−0·5	+1·3	+0·2
Upper Sub-Himalayas.	Dehra Dun	+1·6	+0·8	−0·8	+1·0	−0·3	−2·6	−1·0	+0·9	−1·8	−0·3	−1·0	−0·1	−0·3
	Roorkee	+0·8	−0·7	−0·9	+0·6	−0·4	−2·0	−1·4	+0·7	−2·6	−0·5	−0·6	−0·6	−0·6
	Meerut	+1·6	−0·2	−0·9	+0·6	−0·3	+0·2	−0·6	+0·4	−2·9	−0·2	−0·6	+0·2	−0·2
	Lahore	+1·0	−0·2	−0·4	−0·2	−0·6	−2·1	−1·2	−0·3	−0·6	−0·4	−1·0	−1·1	−0·6
	Ludhiana	+0·3	−0·6	−1·6	−0·4	−0·4	−2·1	−1·4	−0·7	−1·5	−0·6	−1·1	−1·3	−1·0
North-West Frontier, Indus Valley and North-West Rajputana.	Peshawar	−0·4	−1·8	−0·8	−1·1	+0·6	+0·1	−0·9	−0·5	0	−0·1	−0·7	−0·7	−0·5
	Jacobabad	+1·9	−1·4	−0·2	+0·6	+0·8	−0·7	−0·6	−0·1	−0·4	0	−0·9	−0·4	−0·1
	Kurrachee	+0·5	−1·7	−1·3	−0·1	−0·5	−1·5	−2·5	−1·3	−1·1	−0·2	−0·8	−0·1	−0·9
East Rajputana, Central India and Gujarat.	Jaipur	+1·4	+0·6	−0·6	+1·3	+0·4	−1·4	−0·9	+0·8	−1·9	−0·	−0·8	+0·8	−0·1
	Deesa	+0·6	−1·5	−1·7	+0·8	−0·8	−2·8	−0·9	+0·1	−1·7	−0·6	−1·0	+0·8	−0·7

TABLE XXII.—*Comparison of the mean cloud proportion in each month of 1901 with the averages of past years*—concld.

Meteorological Province.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
Deccan	Belgaum	+1·2	+2·0	+1·8	+1·7	+0·3	+0·6	+0·3	+0·4	−0·9	−1·2	+1·4	+1·5	+0·8
	Sholapur	+0·6	+2·3	+1·5	+1·0	+0·2	+0·5	+0·6	+0·5	−1·8	−1·6	+0·8	+0·9	+0·5
	Poona	+0·6	+0·7	+0·4	+0·8	0	−0·9	−0·2	+0·8	−1·3	−1·3	+0·1	+0·9	+0·1
	Akola	+2·2	+1·5	+1·0	+1·6	+0·5	−0·9	+0·5	+1·4	−1·5	−1·0	−0·5	+2·2	+0·6
	Buldana	+0·5	+0·4	+0·2	+1·5	−0·4	−0·7	+1·5	+2·0	−1·1	−1·5	−1·0	+0·3	+0·1
	Khandwa	+1·3	+0·8	+0·1	+1·7	+1·0	−1·1	−0·1	+1·2	−0·9	−0·3	−0·3	+1·2	+0·4
	Nagpur	+2·5	+3·2	+1·0	+2·2	+0·8	−0·9	−0·1	+0·3	−2·6	−0·4	+0·1	+1·2	+0·6
	Hyderabad (Deccan)	+1·3	+2·9	+1·0	+1·0	+0·3	0	+0·9	+0·8	−0·6	−0·7	+1·8	+0·8	+0·8
West Coast	Bombay	+0·8	+1·0	0	+0·3	−1·3	−0·4	−0·1	+0·2	−2·0	−1·4	−0·2	+1·2	−0·2
	Karwar	−0·3	+1·4	0	−0·3	+0·1	+0·4	+0·1	−0·1	−1·6	−1·3	+1·2	+0·6	0
South India	Salem	−0·1	+2·2	+0·4	+1·4	+0·9	+0·4	+1·2	+0·5	+1·2	0	+1·7	+1·2	+0·9
	Chitaldroog	+0·3	+2·3	−0·3	+1·4	+0·5	+0·2	+0·3	+0·2	−0·4	−0·5	+2·1	+0·5	+0·6
	Bangalore	−0·7	+1·7	−0·9	+1·3	−0·5	+1·4	+2·3	+1·8	+1·1	−0·5	+1·4	−0·6	+0·7
	Hassan	+0·2	+2·4	+0·2	+1·0	+1·2	+0·4	+0·4	+0·3	0	−0·6	+0·6	+0·5	+0·6
	Mysore	+2·0	+3·9	+2·4	+3·0	+2·6	+1·6	+0·7	+0·1	+0·4	+0·7	+1·6	+1·9	+1·7
	Madras	−0·1	+0·9	0	+1·0	−0·5	−0·5	+0·5	+0·3	−0·5	−0·2	+1·2	−0·3	+0·2
	Bellary	+2·6	+4·6	+2·1	+3·0	+1·1	+1·0	+1·0	+1·1	+0·9	+1·1	+3·5	+1·9	+2·0
Hill Station, Baluchistan.	Quetta	+1·4	−2·3	−1·0	−0·2	+1·2	−0·8	+0·7	−0·1	+0·1	−0·3	−0·9	−0·9	−0·3
Hill Stations, Northern India.	Leh	+0·4	−0·8	−1·4	0	−1·0	−0·2	−0·8	−1·0	−0·2	−1·8	−2·3	−1·1	−0·9
	Srinagar	+0·6	+0·4	−1·0	+0·9	+0·4	+1·0	−0·1	+0·1	−0·6	−0·9	−2·2	−1·8	−0·3
	Kailang	+0·9	+0·6	−0·7	+1·2	−0·8	+0·5	+0·1	+0·6	+0·4	−1·4	−2·3	−1·1	−0·2
	Simla (Ridge)	+2·0	+0·9	−0·6	+0·4	−1·0	−3·6	−1·5	+0·7	−1·0	−0·9	−1·5	−0·5	−0·6
	Chakrata	+0·8	+0·7	−0·5	+0·5	−0·3	−2·6	−1·0	+0·5	−1·8	−0·6	−1·1	−0·1	−0·5
	Ranikhet	+1·3	+0·1	−1·2	+1·4	−0·8	−3·9	−0·5	+0·7	−1·0	+0·3	−0·7	+0·2	−0·3
	Katmandu	+1·4	+0·4	+0·1	−2·2	+0·7	+0·6	+1·0	+0·6	+0·1	−0·9	−0·4	−0·5	+0·1
	Darjeeling	+1·2	−1·0	+0·2	−1·1	−1·1	−1·0	−1·3	−0·7	−1·2	−0·5	+1·0	−0·1	−0·5
Hill Stations, Central India.	Mount Abu	+1·6	−1·1	−1·7	+1·6	0	−2·6	−1·2	+0·6	−0·9	−0·1	−0·9	+1·7	−0·3
	Pachmarhi	+2·2	+2·1	+0·4	+3·3	+0·8	−1·9	−0·3	+0·8	−1·9	−0·7	−0·3	+1·0	+0·5
	Chikalda	+0·6	+1·0	−0·7	+1·0	−0·2	−1·7	−1·3	+0·7	−2·3	−1·5	−1·6	−0·2	−0·5
Hill Station, South India.	Wellington	+0·9	+2·5	+0·2	+0·2	+0·6	+0·6	+1·1	+1·1	+1·4	−0·1	+1·5	−0·9	+0·8
Extra India	Aden	+1·2	+0·6	0	+1·0	+0·4	+0·4	+0·7	+0·6	−0·6	−0·8	−1·4	−0·1	+0·2
	Perim	−0·4	+0·4	−0·2	+0·4	−0·7	−1·2	−1·4	−1·4	−2·8	−1·0	−1·7	−0·4	−0·9
	Zanzibar	+1·1	+3·2	+1·3	+1·8	+2·0	+1·0	+1·9	+0·6	+0·8	+1·7	+1·4	+1·7	+1·5
	Port Victoria (Seychelles)	−0·8	−0·2	−0·9	+1·3	−0·1	−2·1	+0·3	−0·6	+1·2	−0·8	+0·1	−0.3	−0.2

TABLE XXIII.—*Geographical summary of the cloud data of Table II in the monthly weather reviews of 1901.*

METEOROLOGICAL AREA.	Number of stations.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	YEAR.
North-West Himalaya	6	+1·0	+0·3	−0·9	+0·7	−0·6	−1·5	−0·6	+0·3	−0·7	−0·5	−1·7	−0·7	−0·4
Sikkim Himalaya and Nepal	2	+1·3	−0·3	+0·2	−1·7	−0·2	−0·2	−0·2	−0·1	−0·6	−0·7	+0·3	−0·3	−0·2
Punjab Plains	3	+0·3	−0·9	−0·9	−0·6	−0·1	−1·4	−1·2	−0·5	−0·7	−0·4	−0·9	−1·0	−0·7
Gangetic Plain	5	+1·5	+0·7	−0·8	+0·9	−0·4	−1·6	−0·7	+0·6	−1·9	−0·6	−0·5	+0·1	−0·2
Western Rajputana	4	+1·2	−1·4	−1·2	+0·7	−0·1	−1·9	−1·3	−0·2	−1·0	−0·2	−0·9	+0·5	−0·5
Eastern Rajputana and Central India	1	+1·4	+0·6	−0·6	+1·3	+0·4	−1·4	−0·9	+0·8	−1·9	−0·3	−0·8	+0·8	−0·1
Nerbudda Valley	1	+1·3	+0·8	+0·1	+1·7	+1·0	−1·1	−0·1	+1·2	−0·9	−0·3	−0·3	+1·2	+0·4
Chota Nagpur	1	+3·0	+3·7	−0·5	+2·2	+0·7	−0·6	+0·2	+0·8	−1·3	−0·1	+0·5	+1·0	+0·8
Lower Bengal	2	+1·5	+1·1	−1·3	+1·3	−1·1	−0·6	+0·2	+0·2	−0·5	−0·1	+1·3	+1·0	+0·3
Orissa	1	+1·4	+0·6	−0·2	+1·6	−1·1	−0·7	+0·5	+0·8	+0·1	+0·7	+1·3	−0·5	+0·4
Central Provinces (South) and Berar	5	+1·6	+1·6	+0·4	+1·9	+0·3	−1·2	+0·1	+1·0	1·9	−1·0	−0·7	+0·9	+0·3
Konkan	2	+0·3	+1·2	0	0	−0·6	0	0	+0·1	−1·8	−1·4	+0·5	+0·9	−0·1
Deccan, Hyderabad and Mysore	9	+0·9	+2·5	+0·9	+1·6	+0·6	+0·5	+0·7	+0·7	−0·3	−0·5	+1·5	+0·9	+0·8
East Coast and Carnatic	2	−0·1	+1·6	+0·2	+1·2	+0·2	−0·1	+0·9	+0·4	+0·4	0	+1·5	+0·5	+0·6
Arakan and Pegu	4	+0·3	+0·4	−0·4	−0·2	+0·1	+0·7	+0·3	+0·7	−0·3	+0·9	+0·7	0	+0·3
Bay Islands	2	−0·1	+0·4	−0·3	−0·4	+0·5	+0·3	+0·4	+0·2	−0·4	+1·6	+1·3	−0·1	+0·3
Extra-Tropical India	25—26	+1·2	+0·2	−0·8	+0·6	−0·3	−1·3	−0·6	+0·2	−1·0	−0·5	−0·6	0	−0·2
Tropical India	25	+0·7	+1·7	+0·3	+1·0	+0·3	+0·1	+0·5	+0·7	−0·6	−0·3	+0·9	+0·6	+0·5
Whole India	50—51	+1·0	+0·9	−0·2	+0·8	0	−0·6	−0·1	+0·4	−0·8	−0·4	+0·1	+0·3	+0·1

TABLE XXIV.—*Variations of the mean cloud amount from the normal in nine meteorological provinces of India in 1901.*

METEOROLOGICAL PROVINCE.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	YEAR.
Burma Coast and Bay Islands	+0·3	+0·5	0	−0·6	+0·4	+0·5	+0·3	+0·5	−0·4	+1·2	+0·8	−0·1	+0·3
Bengal and Orissa	+1·3	+0·7	−0·9	+1·5	−0·9	−0·3	+0·2	+0·5	−0·2	+0·3	+1·2	+0·5	+0·3
Gangetic Plain and Chota Nagpur	+2·2	+2·5	−0·6	+1·4	−0·2	−1·3	−0·1	+0·6	−1·2	−0·8	+0·1	+0·7	+0·3
Upper Sub-Himalayas	+1·1	−0·2	−0·9	+0·3	−0·4	−1·7	−1·1	+0·2	−1·9	−0·4	−0·9	−0·6	−0·5
North-West Frontier, Indus Valley and North-West Rajputana.	+0·7	−1·6	−0·8	−0·2	+0·3	−0·7	−1·3	−0·6	−0·5	−0·1	−0·8	−0·4	−0·5
East Rajputana, Central India and Gujarat	+1·0	−0·5	−1·2	+1·1	−0·2	−2·1	−0·9	+0·5	−1·8	−0·5	−0·9	+0·8	−0·4
Deccan	+1·3	+1·7	+0·9	+1·4	+0·3	−0·4	+0·4	+0·9	−1·3	−1·0	+0·1	+1·1	+0·5
West Coast	+0·3	+1·2	0	0	−0·6	0	0	+0·1	−1·8	−1·4	+0·5	+0·9	−0·1
South India	+0·6	+2·6	+0·6	+1·7	+0·8	+0·6	+0·9	+0·6	+0·4	0	+1·7	+0·7	+0·9

I.—The cold weather period.—The variations from normal of the cloud proportion closely followed the abnormalities of the vapour pressure and humidity. Thus in the cold weather period the cloud proportion was, like the humidity, excessive generally in Upper India and over the greater part of the Peninsula. In January the excess was greatest in Chota Nagpur, but exceeded 2 over the greater part of the East Satpuras and neighbouring parts of the Gangetic Plain and over the centre of the Peninsula. The following gives data :—

Station.	Variation of cloud amount from normal in		
	January.	February.	Period, January and February.
Hazaribagh	+3·0	+3·7	+3·3
Allahabad	+2·5	+2·0	+2·2
Pachmarhi	+2·2	+2·1	+2·1
Nagpur	+2·5	+3·2	+2·8
Akola	+2·2	+1·5	+1·8
Hyderabad (Deccan)	+1·3	+2·9	+2·1
Bellary	+2·6	+4·6	+3·6
Chitaldroog	+0·3	+2·3	+1·3
Mysore	+2·0	+3·9	+2·9

Cloud was in slight excess in the Punjab, South-West Rajputana and Sind in January and in moderate defect in February. The following gives data :—

Station.	Variation of cloud amount from normal in		
	January.	February.	Period, January and February.
Ludhiana	+0·3	—0·6	—0·1
Lahore	+1·0	—0·2	+0·4
Peshawar	—0·4	—1·8	—1·1
Jacobabad	+1·9	—1·4	+0·2
Kurrachee	+0·5	—1·7	—0·6
Deesa	+0·6	—1·5	—0·4
Mount Abu	+1·6	—1·1	+0·2

The cloud amount was about normal over Burma and the Bay Islands during the period. The following gives data :—

Station.	Variation of cloud amount from normal in		
	January.	February.	Period, January and February.
Port Blair	+0·4	+1·2	+0·8
Diamond Island	—1·0	—0·2	—0·6
Rangoon	+1·3	+1·0	+1·1
Akyab	+0·3	+0·8	+0·5
Chittagong	+0·6	—0·2	+0·2

Skies were slightly cloudier than usual during the period at the hill stations of India and Kashmir. The following gives data :—

Station.	Variation of cloud amount from normal in		
	January.	February.	Period, January and February.
Leh	+0·4	—0·8	—0·2
Srinagar	+0·6	+0·4	+0·5
Kailang	+0·9	+0·6	+0·7
Simla	+2·0	+0·9	+1·4
Chakrata	+0·8	+0·7	+0·7
Ranikhet	+1·3	+0·1	+0·7
Katmandu	+1·4	+0·4	+0·9
Darjeeling	+1·2	—1·0	+0·1
Mount Abu	+1·6	—1·1	+0·2
Pachmarhi	+2·2	+2·1	+2·1
Chikalda	+0·6	+1·0	+0·8
Wellington	+0·9	+2·5	+1·7

II.—The hot weather period.—The variations from normal of the cloud amount during this period were somewhat irregular. During the period skies were more heavily clouded than usual over the Peninsula. The following gives data :—

Station.	Variation of cloud amount from normal in.			
	March.	April.	May.	Period, March to May.
Nagpur	+1·0	+2·2	+0·8	+1·3
Akola	+1·0	+1·6	+0·5	+1·0
Hyderabad (Deccan)	+1·0	+1·0	+0·3	+0·8
Sholapur	+1·5	+1·0	+0·2	+0·9
Belgaum	+1·8	+1·7	+0·3	+1·3
Bellary	+2·1	+3·0	+1·1	+2·1
Mysore	+2·4	+3·0	+2·6	+2·7
Bangalore	—0·9	+1·3	—0·5	0

Skies were, except in April, clearer than usual throughout the period over Burma and Bengal. The following gives data :—

Station.	Variation of cloud amount from normal in.			
	March.	April.	May.	Period, March to May.
Diamond Island	—2·0	—1·8	+1·0	—0·9
Rangoon	+0·5	—1·3	0	—0·3
Chittagong	—1·1	+1·6	—0·5	0
Saugor Island	—1·6	+0·9	—1·2	—0·6
Calcutta	—0·8	+1·7	—0·9	0
Darbhanga	—0·8	0	—0·4	—0·4

Skies were on the mean of the period slightly clearer than usual over Lower Sind, the Punjab, and the Upper Sub-Himalayas. The following gives data :—

Station.	Variation of cloud amount from normal in			
	March.	April.	May.	Period, March to May.
Deesa	—1·7	+0·8	—0·8	—0·6
Mount Abu	—1·7	+1·6	0	0
Kurrachee	—1·3	—0·1	—0·5	—0·6
Peshawar	—0·8	—1·1	+0·6	—0·4
Lahore	—0·4	—0·2	—0·6	—0·4
Ludhiana	—1·6	—0·4	—0·4	—0·8
Roorkee	—0·9	+0·6	—0·4	—0·2
Meerut	—0·9	+0·6	—0·3	—0·2

Cloud was in defect at the Upper India hill stations and in Thibet in March and May and in excess in April, as shown by the following data :—

Station.	Variation of cloud amount from normal in			
	March.	April.	May.	Period, March to May.
Leh	—1·4	0	—1·3	—0·8
Srinagar	—1·0	+0·9	+0·4	+0·1
Simla	—0·6	+0·4	—1·0	—0·4
Chakrata	—0·5	+0·5	—0·3	—0·1
Ranikhet	—1·2	+1·4	—0·8	—0·2

III.—The south-west monsoon period.—During June and July, cloud was in defect over North-Western India generally, the defect being greatest in Lower Sind and along the hills and the submontane areas of the United Provinces and Punjab. The following gives data :—

Station.	Variation of cloud amount from normal in		
	June.	July.	Period, June and July.
Kurrachee	—1·5	—2·5	—2·0
Deesa	—2·8	—0·9	—1·8
Mount Abu	—2·6	—1·2	—1·9
Jaipur	—1·4	—0·9	—1·1
Lahore	—2·1	—1·2	—1·6
Ludhiana	—2·1	—1·4	—1·7
Dehra Dun	—2·6	—1·0	—1·8
Roorkee	—2·0	—1·4	—1·7
Allahabad	—2·7	—0·7	—1·7
Simla	—3·6	—1·5	—2·5
Chakrata	—2·6	—1·0	—1·8
Ranikhet	—3·9	—0·5	—2·2

During these months skies were slightly more heavily clouded than usual in the centre and south of the Peninsula and in Burma. The following gives data :—

Station.	Variation of cloud amount from normal in		
	June.	July.	Period, June and July.
Mysore	+1·6	+0·7	+1·1
Bangalore	+1·4	+2·3	+1·8
Bellary	+1·0	+1·0	+1·0
Sholapur	+0·5	+0·6	+0·5
Belgaum	+0·6	+0·3	+0·4
Hyderabad (Deccan)	0	+0·9	+0·4
Diamond Island	+0·3	+0·8	+0·5
Rangoon	+0·7	+0·6	+0·6
Akyab	+0·8	—0·4	+0·2

In other areas the variations from normal were very slight.

In August skies were generally more heavily clouded than usual, the excess being greatest over the Deccan and the head of the Peninsula. But in September cloud was in general defect, except in the south of the Peninsula, where it was in slight excess.

The following gives data for the areas of excessive cloud during these months :—

Station.	Variation of cloud amount from normal in		
	August.	September.	Period, August and September.
Khandwa	+1·2	—0·9	+0·1
Akola	+1·4	—1·5	0
Sholapur	+0·5	—1·8	—0·6
Hyderabad (Deccan)	+0·8	—0·6	+0·1
Bellary	+1·1	+0·9	+1·0
Bangalore	+1·8	+1·1	+1·4
Salem	+0·5	+1·2	+0·8
Mysore	+0·1	+0·4	+0·3

Cloud was deficient during both months in Sind and the Punjab. The following gives data :—

Station.	Variation of cloud amount from normal in		
	August.	September.	Period, August and September.
Kurrachee	—1·3	—1·1	—1·2
Jacobabad	—0·1	—0·4	—0·2
Lahore	—0·3	—0·6	—0·4
Ludhiana	—0·7	—1·5	—1·1
Peshawar	—0·5	0	—0·2

Cloud was in more or less considerable defect in September in the United Provinces and South-West Rajputana, where, however, it was in slight excess in August. The following gives data :—

Station.	Variation of cloud amount from normal in		
	August.	September.	Period, August and September.
Deesa	+0·1	—1·7	—0·8
Roorkee	+0·7	—2·6	—0·9
Meerut	+0·4	—2·9	—1·2
Allahabad	+1·0	—0·6	+0·2

The variations from normal elsewhere were slight.

IV.—The retreating south-west monsoon period.—Fine weather obtained in the Punjab and Sind during the greater part of the period and the cloud proportion was in general defect in that area. The following gives data in illustration.—

Station.	Variation of cloud amount from normal in			
	October.	November.	December.	Period, October to December.
Peshawar	—0·1	—0·7	—0·7	—0·5
Lahore	—0·4	—1·0	—1·1	—0·8
Ludhiana	—0·6	—1·1	—1·3	—1·0
Jacobabad	0	—0·9	—0·4	—0·4
Kurrachee	—0·2	—0·8	—0·1	—0·4

Over Gujarat, Rajputana, the United Provinces and the Central Provinces the cloud proportion was in defect in October and November and in moderate excess in December ; the following gives data :—

Station.	Variation of cloud amount from normal in			
	October.	November.	December.	Period, October to December.
Deesa	—0·6	—1·0	+0·8	—0·3
Mount Abu	—0·1	—0·9	+1·7	+0·2
Jaipur	—0·3	—0·8	+0·8	—0·1
Meerut	—0·2	—0·6	+0·2	—0·2
Allahabad	—0·4	—0·5	+1·3	+0·1
Nagpur	—0·4	+0·1	+1·2	+0·3
Khandwa	—0·3	—0·3	+1·2	+0·2
Akola	—1·0	—0·5	+2·2	+0·2
Buldana	—1·5	—1·0	+0·3	—0·7

In the Deccan, the West Coast, South India, East Coast, North-East India and Burma cloud was generally normal or in slight excess on the mean of the period, except that in October cloud was in moderate defect in North Bengal, the Deccan and the West Coast.

The following data illustrate these features :—

Station.	Variation of cloud amount from normal in			
	October.	November.	December.	Period, October to December.
Bombay	—1·4	—0·2	+1·2	—0·1
Poona	—1·3	0·1	+0·9	—0·1
Karwar	—1·3	+1·2	+0·6	+0·2
Belgaum	—1·2	+1·4	+1·5	+0·6
Sholapur	—1·6	+0·8	+0·9	0
Bellary	+1·1	+3·5	+1·9	+2·2
Mysore	+0·7	+1·6	+1·9	+1·4
Madras	—0·2	+1·2	—0·3	+0·2
False point	+0·7	+1·3	—0·5	+0·5
Calcutta	—0·4	+1·2	+0·7	+0·5
Darbhanga	—1·8	+0·2	—0·2	—0·6
Chittagong	+0·5	+0·9	+0·4	+0·6
Diamond Island	+1·2	—0·1	—0·8	+0·1
Rangoon	+2·4	+1·7	+1·4	+1·8
Port Blair	+1·3	+1·7	—0·8	+0·7

Cloud was in general defect at the Himalayan stations and in Kashmir throughout the period, as is shewn by the follo wing data:—

Station.	Variation of cloud amount from normal in			
	October.	November.	December.	Period, October to December.
Leh	—1·8	—2·3	—1·1	—1·7
Srinagar	—0·9	—2·2	—1·8	—1·6
Kailang	—1·4	—2·3	—1·1	—1·6
Simla	—0·9	—1·5	—0·5	—1·0
Chakrata	—0·6	—1·1	—0·1	—0·6
Ranikhet	+0·3	—0·7	+0·2	—0·1
Katmandu	—0·9	—0·4	—0·5	—0·6
Darjeeling	—0·5	+1·0	—0·1	+0·1

The year.—The mean cloud amount was on the average of the year in very slight excess (+0·1) over the whole Indian area. This excess in the average for India was entirely due to an excess (+0·5) of cloud in Tropical India, the cloud proportion in Extra-Tropical India being in slight defect (—0·2).

The following gives data for these two areas and for the whole of India for the four periods into which the year is divided and for the year:—

Station.	Variation of mean cloud amount from normal in				
	Period I.	Period II.	Period III.	Period IV.	Whole year.
Extra-Tropical India	+0·7	—0·2	—0·7	—0·4	—0·2
Tropical India	+1·2	+0·5	+0·2	+0·4	+0·5
Whole India	+1·0	+0·2	—0·3	0	+0·1

The following table gives the variation of the mean amount of cloud in the Indian area, year by year, for the period, 1875—1901:—

Year.	Amount of variation.	Year.	Amount of variation.
1875	0	1888	—0·1
1876	—0·2	1889	+0·1
1877	+0·3	1890	+0·2
1878	+0·1	1891	+0·1
1879	—0·1	1892	+0·1
1880	—0·1	1893	+0·5
1881	—0·1	1894	+0·5
1882	0	1895	+0·1
1883	+0·1	1896	—0·2
1884	—0·1	1897	0
1885	+0·2	1898	—0·2
1886	+0·2	1899	—0·3
1887	—0·1	1900	+0·2
		1901	+0·1

Rainfall.

The rainfall data of India are now issued in a separate volume. The eleventh volume, that of 1901, contains the rainfall data of 2,360 stations, which are classified under their respective administrative divisions according to the following scheme:—

Province.	Number of stations.
Burma	147
Assam	116
Bengal, Bihar, Chota Nagpur and Orissa	365
United Provinces of Agra and Oudh	277
Punjab	188
North-West Frontier Province	25
Bombay	280
Madras	389
Coorg	10
Central Provinces	68
Berar	44
Mysore	78
Baluchistan	54
Kashmir	39
Rajputana	139
Central India	65
Hyderabad (Deccan)	23
Travancore	39
Cochin	3
Pudukota	11

The volume contains the whole of the available information for the year 1901 of this important element of meteorological observation.

The information includes monthly statements of—

(*a*) the actual rainfall, day by day, of all the rainfall stations;

(*b*) the total rainfall of the month;

(*c*) the number of rainy days during the month;

(*d*) the average or normal rainfall of the month of all stations for which rainfall data of at least five years are available;

(*e*) the average or normal number of rainy days of the month for all stations for which rainfall data of five years or upwards are available;

(*f*) the accumulated rainfall (up to the date of each statement) throughout each of the seasons into which the year is divided.

Symons's rain-gauges are now used at all rain-gauge stations, with the exception of those in Mysore. The hour of measuring rainfall is 8 A.M. throughout India, and the amounts registered give the rainfall of the previous 24 hours, and hence generally of the previous civil day.

In table XXV of the Annual Summary for 1896 are given the normal means of rainfall for 535 stations determined from the whole of the available data down to December 1896. The stations for which the means are given were selected by Mr. Blanford, and normal means were given in the rainfall sections of the Annual Reports on the Meteorology of India. The last series of means was given in the Annual Report on the Meteorology of India for 1890. The normal means in Table XXV of the Annual Summary for 1896 are based on six years' additional data. This period, however, includes the three years, 1892—94, of abnormally heavy rainfall, and hence the means given in this table are in almost all cases higher than those given in Table XXXI of the Annual Report on the Meteorology of India for 1890. The following gives six instances of the considerable apparent increase in the mean rainfall:—

Province.	Station.	Average annual rainfall based on data up to 1890.	Average annual rainfall based on data up to 1896.	Increase in average result.
		Inches.	Inches.	Inches.
Bombay	Lonavla	164·24	172·75	+8·51
	Jetalsar	23·60	30·39	+6·79
Bengal and Orissa	Keonjhar	31·29	37·98	+6·69
	Narsingpur	39·02	44·72	+5·70
	Bispara	49·69	55·07	+5·38
Central Provinces	Sarangarh	50·50	55·84	+5·34

Table XXV gives the variations of the monthly and annual rainfall in 1901 of 548 stations in India, Baluchistan and Burma.

The following four tables (Tables XXVI to XXIX) give summaries of the rainfall data of the year. In the first two tables (Tables XXVI and XXVII) the summaries are drawn up in the form that was used for many years in the Annual Reports issued by the Department and are based on the rainfall returns of 432 selected stations. Is the two succeeding tables (Tables XXVIII and XXIX) the actual average rainfall data (derived from the returns of 2,360 rain-guage stations in India) are given for the 57 meteorological districts into which the Empire is divided for the comparison of crops and rainfall for the four periods into which the year may be arranged. The four periods are as follows:—

1st.—From January 1st to February 28th, which forms the period of the cold weather rains of Upper India.

2nd.—From March 1st to May 31st, which includes the hot season, when rain occurs mainly in the coast districts, and in Assam during thunderstorms.

3rd.—From June 1st to October 31st, which forms the period of the south-west monsoon rains proper.

4th.—From November 1st to December 31st, which includes the period of the so-called north-east monsoon rains of Southern India, more especially of the Coromandel Coast districts.

TABLE XXV.—*Comparison of the monthly and total rainfall (in inches) in 1901, with the averages of past years.*

Province.	Station	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November	December.	Total.
		Inch.	Inches.	Inches.	Inch.	Inches.	Inches.	Inches.	Inch.	Inch.	Inch.	Inch.	Inches.	Inches.
Baluchistan	Kalat	+0·82	−2·52	−0·55	−0·27	+0·99	−0·21	+1·45	−0·52	−0·05	−0·07	−0·35	−0·60	−1·88
	Pishin	−0·44	−2·12	−0·74	−0·73	+0·49	−0·06	−0·21	−0·21	−0·01	−0·06	−0·75	−1·37	−6·21
	Chaman	+0·40	−2·39	−1·13	−0·44	0	−0·22	−0·29	0	0	−0·09	−0·88	−0·81	−5·85
	Quetta	+0·05	−2·07	−0·62	−0·87	+0·89	−0·19	−0·24	−0·52	−0·13	−0·09	−0·31	−0·83	−5·03
	Mach	−0·86	−2·36	+0·51	−0·01	+1·89	−1·25	−0·62	+0·21	−0·05	−0·62	−0·21	−0·87	−4·24
	Beleli	−0·46	−2·79	+0·21	−0·61	+0·16	−0·22	−0·11	−0·56	−0·04	−0·10	−0·93	−1·60	−7·05
	Kuchelak	−0·48	−2·50	−0·16	−0·40	+0·80	−0·13	−0·09	−0·25	−0·19	−0·13	−0·89	−1·80	−6·22
	Fort Sandeman	−0·41	−0·65	+0·28	−0·25	+3·20	−0·84	−2·47	−0·03	+0·11	−0·10	−0·56	−0·20	−2·92

TABLE XXV.—*Comparison of the monthly and total rainfall in inches in 1901, with the averages of past years*—contd.

PROVINCE.	STATION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
		Inches.	Inches.	Inches.	Inch.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
BALUCHISTAN —*concld.*	Bostan	+0·11	−3·13	−0·11	−0·46	+0·80	−0·29	−0·21	−0·26	−0·04	−0·12	−0·76	−2·11	−6·58
	Yarookarez	+0·11	−2·37	−0·76	−0·54	+0·71	−0·08	+0·10	−0·23	0	−0·07	−0·46	−1·80	−5·39
	Syad Hamed	−0·44	−2·94	−0·56	−0·28	+0·58	−0·01	0	−0·13	0	−0·10	−1·06	−1·55	−6·49
	Gulistan	−0·28	−2·35	−0·85	−0·34	+0·54	−0·07	−0·05	0	−0·06	−0·10	−0·91	−1·56	−6·03
	Killa Abdulla	+1·44	−2·51	−0·46	−0·08	+0·87	−0·05	−0·13	−0·04	0·03	−0·15	−1·29	−1·61	−4·64
	Khanai	−1·02	−2·97	+0·13	−0·59	+0·88	−0·28	−0·14	−0·30	0	−0·11	−0·71	−1·65	−6·76
	Fuller's Camp	−1·87	−3·32	−0·69	−0·72	+1·00	−0·16	+0·10	−0·22	−0·09	−0·13	−0·96	−1·51	−8·57
	Kachh	+5·33	−2·77	−0·83	−0·31	−0·11	−0·36	+0·31	−0·23	−0·14	−0·10	−0·97	−1·35	−1·53
	Mudgorge	−0·95	−1·84	−0·91	−0·24	+1·53	−0·32	+0·89	−0·04	−0·06	−0·13	−1·23	−0·92	−4·22
	Mangi	+0·72	−1·74	+0·35	−0·59	+1·37	−0·79	+1·01	+0·30	−0·16	−0·13	−0·99	−1·36	−2·01
	Dirgi	−0·24	−1·39	+0·21	−0·47	+2·07	−0·68	+1·35	−0·39	−0·15	−0·09	−0·78	−1·46	−2·02
	Khost	−1·30	−2·18	+0·16	+0·04	+2·83	−0·67	+0·43	−0·68	−0·24	−0·29	−1·34	−1·46	−4·70
	Shahrig	−1·23	−1·59	+0·47	+0·02	+2·57	−1·25	+0·21	−1·79	−0·44	−0·17	−0·98	−1·05	−5·23
	Nasak	−0·71	−2·40	−1·12	−0·25	+2·12	−1·69	+1·01	−2·77	−0·59	−0·13	−1·00	−1·13	−8·66
	Harnai	−0·69	−2·35	−0·31	+0·10	+1·94	−1·67	−0·07	−2·04	−0·08	−0·12	−0·80	−1·22	−7·31
	Sunari	−0·16	−1·67	+0·30	−0·12	+1·77	−1·39	−1·94	−1·88	−0·56	−0·12	−0·70	−0·89	−7·36
	Spintangi	+0·44	−1·54	+0·63	0	+1·72	−1·11	−0·43	−2·34	−0·09	0	−0·57	−0·80	−4·09
	Mushkaf	?	?	−0·46	−0·06	+2·00	−0·33	+1·36	+0·25	−0·02	0	−0·17	−0·06	?
	Baber Kach	+0·04	−0·89	+0·19	−0·09	+1·84	−0·49	+0·69	−0·16	−0·09	−0·04	−0·41	−0·52	+0·07
	Loralai (Hospital)	−0·21	+0·68	+0·05	+0·16	+3·70	−0·70	+0·66	−0·34	−0·14	−0·19	−0·40	−0·38	+2·89
	Nari	−0·01	−0·80	−0·12	−0·08	+2·30	−0·35	+0·14	+0·81	−0·22	−0·01	−0·32	−0·49	+0·85
	Sibi	−0·24	−0·45	−0·05	−0·08	+2·89	−0·30	+0·46	−0·50	−0·12	0	−0·26	−0·56	+0·79
	Kolepur	+0·36	−2·37	+0·10	−0·49	+1·19	−0·16	−0·89	−0·76	−0·21	−0·06	−0·34	−1·09	−4·72
	Mittri	−0·39	−0·28	−0·09	−0·15	+2·00	−0·28	+1·40	−0·42	0	−0·01	−0·23	−0·42	+1·11
	Lindsay	+0·08	−0·53	−0·26	−0·11	+0·90	−0·23	+0·17	−0·74	+0·01	0	−0·19	−0·31	−1·21
	Bellput	+0·25	−0·22	+0·38	−0·05	+3·07	−0·15	−0·07	−0·81	+1·57	0	−0·28	−0·16	+3·53
	Nuttal	+0·11	−0·41	+0·81	−0·09	+1·63	−0·11	−1·06	+0·02	−0·20	0	−0·56	−0·36	−0·22
	Temple Dera	−0·37	−0·46	+0·64	−0·07	+1·39	−0·33	−0·56	−1·16	−0·03	0	−0·33	−0·16	−1·44
	Jhatput	−0·17	−0·43	+0·01	−0·03	+0·54	−0·16	+0·50	−0·77	−0·17	0	−0·29	−0·14	−1·11
	Sangal	+1·21	−2·44	−1·45	−0·52	0	−0·02	−0·38	−0·09	0	−0·19	−0·74	−0·74	−5·36
	Shalabagh	−0·21	−3·34	−0·40	+0·29	+0·96	−0·04	−0·71	0	0	−0·16	−0·69	−1·80	−6·10
	Panir	−0·55	−0·66	−0·52	0	+2·55	−0·31	+0·05	−0·34	−0·04	−0·01	−0·14	−0·36	−0·33
PUNJAB AND NORTH-WEST FRONTIER PROVINCE.	Abbottabad	+4·01	−0·54	+1·47	+0·03	+3·61	−1·58	−5·11	+1·00	+0·76	+0·30	−1·01	−1·94	+1·00
	Cherat	+3·07	+0·27	−0·68	−0·86	+10·16	+1·45	−0·73	−2·89	−1·04	+1·14	−0·24	−1·00	+8·65
	Murree (Obsy.)	+2·11	−2·64	+0·58	+1·00	+5·09	−2·00	−5·93	−0·29	+1·37	−1·21	−1·49	−1·36	−4·77

TABLE XXV.—*Comparison of the monthly and total rainfall (in inches) in 1901, with the averages of past years*—contd.

PROVINCE.	STATION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
		Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
PUNJAB AND NORTH-WEST FRONTIER PROVINCE—*concld.*	Poo	—0·60	—1·40	—3·76	+0·07	+0·96	- 0·27	—0·75	+0·94	—0·45	—0·75	—0·78	—0·44	—7·23
	Dharamsala	+5·38	+2·36	—0·19	—1·67	+2·63	—7·57	—15·49	+3·96	—8·80	—0·89	—0·38	—2·03	—22·69
	Kailang	—0·36	+1·43	—1·78	—1·25	+1·90	—0·71	+0·06	—0·80	—1·32	—0·43	—0·61	—0·61	—4·48
	Kilba	+0·06	+1·24	—4·06	—2·45	+0·99	—1·86	—2·21	—1·30	—3·70	—1·23	—1·98	—0·49	—16·99
	Simla (Obsy.)	+2·91	+5·95	+2·09	—2·31	—1·75	—5·62	—4·80	+11·18	—3·54	—1·22	—0·45	—0·12	+2·32
	Peshawar (Obsy.)	+0·12	+0·30	+1·25	—0·94	+4·56	+0·12	—1·56	—2·11	+0·54	+0·09	—0·64	—0·50	+1·23
	Kohat	+1·35	—0·38	+0·37	—1·24	+6·91	+0·25	—3·08	—0·84	+2·18	—0·02	—0·70	—0·47	+4·33
	Bannu	+0·16	0	—0·58	—0·94	+3·93	—0·62	—0·01	+1·79	+0·38	—0·15	—0·30	—0·29	+3·37
	Dera Ismail Khan	+0·02	—0·57	—0·09	—0·61	+3·48	+0·38	—1·15	+3·06	—0·47	—0·11	—0·16	—0·31	+3·47
	Dera Ghazi Khan	—0·27	—0·30	+0·38	—0·17	+0·62	—0·51	—1·71	+0·04	—0·35	—0·05	—0·13	—0·25	—2·70
	Muzaffargarh	—0·28	+0·16	—0·28	—0·14	+0·18	—0·26	—1·00	—0·65	—0·41	—0·08	—0·09	—0·27	—3·12
	Mooltan (Obsy.)	—0·17	—0·09	—0·41	—0·10	+0·39	—0·33	—1·76	—1·21	—0·65	—0·08	—0·07	—0·27	—4·75
	Jhang	—0·11	0	—0·16	—0·39	+0·14	—0·57	+1·15	—0·23	—0·62	—0·15	—0·06	—0·32	—1·32
	Montgomery	—0·26	—0·62	+0·26	+0·09	+1·26	—1·20	—0·98	—1·94	—0·93	—0·14	—0·06	—0·26	—4·78
	Shahpur	+0·63	—0·66	—0·29	+0·35	+3·49	—0·22	—1·17	—1·45	0	—0·16	—0·25	—0·36	—0·09
	Rawalpindi	+1·96	+0·19	+0·28	—0·43	+2·73	—1·02	—6·20	—4·06	+2·34	—0·48	—0·71	—1·08	—6·48
	Jhelum	+2·65	—0·11	—0·79	+0·01	+3·68	—1·53	+4·17	—2·63	+2·67	—0·47	—0·27	—0·80	+6·58
	Gujarat	+1·34	—0·81	—1·09	—0·06	+3·01	—2·04	+0·48	—4·19	—0·46	—0·47	—0·24	—0·67	—5·20
	Sialkot (Obsy.)	+0·92	—0·86	—0·18	—0·90	+2·59	—2·66	+1·63	—5·53	—1·49	—0·53	—0·29	—0·79	—8·09
	Gujranwala	+0·50	—1·05	—0·83	—0·40	+0·92	+0·50	—4·29	—1·40	—0·70	—0·46	—0·22	—0·62	—8·05
	Gurdaspur	+1·81	+0·55	+1·08	—0·54	+1·26	—3·94	+3·46	—4·50	+0·88	—0·54	—0·15	—1·08	—1·71
	Lahore	+0·64	—0·91	+0·37	—0·36	+0·51	—1·32	+3·11	—2·12	—2·01	—0·46	—0·13	—0·46	—3·14
	Amritsar	+0·31	+0·11	—0·38	—0·47	+0·94	—2·10	+0·30	—1·46	—1·17	—0·45	—0·20	—0·63	—5·20
	Ferozepore	—0·43	+0·10	—0·27	—0·50	+0·06	—1·24	—1·64	—3·85	—2·28	—0·55	—0·06	—0·48	—11·14
	Jullandar	+2·01	+0·49	—0·34	—0·37	+1·29	—1·24	+0·41	+4·23	—3·17	—0·41	—0·10	—0·40	+1·40
	Hosiharpur	+3·40	+1·74	+0·13	—0·43	+0·31	—3·32	—1·94	—0·73	—2·84	—0·16	—0·15	—0·80	—4·79
	Ludhiana	+1·02	+2·79	—0·80	—0·47	+0·47	—2·15	+1·12	+3·00	—3·70	—0·96	—0·09	—0·54	—0·31
	Umballa	+1·88	+3·66	+1·14	—0·56	+0·33	—3·26	—3·34	—1·88	—2·63	—0·21	—0·26	—0·29	—5·42
	Sirsa	—0·37	+0·09	—0·13	—0·34	—0·52	—2·14	—1·30	—2·45	- 1·92	—0·25	—0·03	—0·14	—9·50
	Hissar	+0·29	—0·03	—0·41	—0·22	—0·49	—1·45	+0·33	—2·46	—1·81	—0·28	—0·08	—0·37	—6·98
	Rohtak	+0·22	+0·26	—0·16	—0·24	—0·70	—2·66	—3·99	—1·32	—2·03	—0·37	—0·04	+0·02	—11·01
	Delhi (Obsy.)	+0·26	—0·08	—0·14	—0·35	—0·15	—1·73	—1·47	+1·57	—4·22	—0·42	—0·10	—0·35	—7·18
	Gurgaon	+0·57	+0·24	—0·37	—0·14	—0·38	—0·71	—4·13	+0·65	—3·84	—0·37	—0·04	—0·18	—8·70
	Karnal	+0·44	—0·03	+0·16	—0·40	—0·95	—3·58	+4·61	—1·20	—4·23	—0·38	—0·13	—0·16	—5·85

TABLE XXV.—*Comparison of the monthly and total rainfall (in inches) in 1901, with the averages of past years*—contd.

PROVINCE.	STATION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
		Inches.	Inches.	Inch.	Inch.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inch.	Inch.	Inches.
SIND	Kurrachee	—0·14	—0·30	—0·13	—0·14	+0·20	—0·51	—2·73	—1·70	—0·65	—0·05	—0·18	—0·19	—6·52
	Sehwan	—0·12	—0·25	—0·19	—0·16	+0·02	—0·32	—1·09	—2·59	—0·55	—0·03	—0·13	—0·03	—5·44
	Tatta	—0·31	—0·22	+0·04	—0·31	+1·04	—1·01	—2·51	—1·70	—0·81	0	—0·22	—0·07	—6·08
	Hyderabad (Obsy.)	—0·06	—0·21	—0·12	—0·16	+0·78	—0·48	—1·98	—3·14	—0·57	0	—0·12	+0·03	—6·03
	Umarkot	—0·09	—0·08	—0·10	—0·09	+0·01	—0·88	—2·48	—2·21	—0·97	—0·16	—0·06	+0·05	—7·06
	Shikarpur	—0·25	—0·13	+0·15	—0·13	+0·26	—0·11	+0·66	—1·64	—0·19	0	—0·14	—0·15	—1·67
	Rohri	—0·26	—0·08	—0·28	—0·21	—0·12	—0·24	—0·07	—1·33	—0·26	—0·01	—0·12	—0·18	—3·16
	Jacobabad	—0·02	—0·03	+0·65	—0·18	+0·54	—0·11	—0·68	—1·23	—0·16	—0·01	—0·13	—0·11	—1·47
CUTCH	Bhuj	—0·03	—0·13	—0·03	—0·10	—0·02	—2·25	—4·19	—0·57	—1·65	—0·38	—0·09	+0·05	—9·39
	Rhahpur	+0·07	—0·10	—0·06	—0·06	—0·03	—1·70	—7·27	—0·39	—2·54	—0·54	—0·20	—0·01	—12·83
	Nagar	—0·03	—0·10	—0·05	—0·03	—0·43	—2·06	—3·20	—3·95	—1·98	—0·27	—0·05	+0·04	—12·11
RAJPUTANA	Jaisalmer	—0·30	—0·13	—0·06	—0·06	—0·26	—0·86	+0·45	—1·91	—0·45	0	—0·03	—0·10	—3·71
	Phalodi	+0·08	—0·07	+0·03	—0·02	—0·33	—0·88	+1·12	+1·09	—0·62	0	0	—0·03	+0·37
	Bikaner	—0·23	—0·21	—0·16	—0·16	—0·01	—1·71	—0·92	—0·29	—1·03	—0·09	—0·07	—0·18	—5·06
	Nagar	—0·11	—0·10	—0·19	—0·05	—0·37	—2·16	+0·25	—1·09	—1·86	—0·06	—0·09	—0·32	—6·15
	Didwana	+0·27	—0·16	—0·33	—0·07	—0·58	—1·18	—0·10	—4·34	—1·87	—0·15	—0·17	—0·25	—8·93
	Jhunjhunu	—0·19	—0·06	—0·27	—0·11	—0·31	—2·99	—5·60	—3·84	—2·26	—0·17	—0·06	—0·02	—15·88
	Khetri	—0·17	+0·06	—0·48	—0·14	+0·28	—2·20	—6·17	—5·19	—2·56	—0·30	—0·12	—0·16	—17·09
	Sikar	+0·09	—0·01	—0·23	—0·08	+0·15	—2·26	—1·47	—4·11	—1·57	—0·24	—0·14	—0·27	—10·14
	Sri Madhopur	+1·22	+0·55	—0·28	—0·09	—0·42	—2·18	—7·32	—3·12	—2·32	—0·06	—0·23	—0·45	—14·70
	Alwar	+0·83	+1·77	—0·30	—0·09	—0·96	—1·40	—2·91	—3·42	—4·58	—0·80	—0·20	—0·45	—12·51
	Bharatpur	+0·60	+1·28	—0·27	—0·11	—0·34	—1·40	—2·68	—4·34	—4·37	+2·86	—0·06	—0·26	—9·09
	Bandikui	+0·75	+1·47	—0·40	—0·06	—0·35	—1·94	+1·18	+1·24	—2·34	+0·06	—0·22	—0·45	—1·06
	Jaipur	+1·11	+0·35	—0·26	—0·17	+0·07	—3·02	—3·25	—1·95	—3·31	+0·73	—0·18	—0·36	—10·24
	Sambhar	+2·00	—0·05	—0·16	—0·13	—0·91	—1·27	—1·83	—2·07	—3·31	—0·33	—0·25	—0·42	—8·73
	Karauli	+0·61	+0·33	—0·11	—0·05	—0·48	—3·09	+0·78	—1·87	—4·90	+2·25	—0·11	—0·26	—6·90
	Lalsot	+0·87	+0·59	—0·07	—0·02	—0·11	—3·31	—1·18	—6·13	—3·11	+0·16	—0·13	—0·20	—12·64
	Tonk	+1·55	+0·44	—0·02	—0·06	—0·22	—2·94	—4·38	—7·14	—2·87	+1·03	—0·08	—0·23	—14·92
	Siwai Madhopur	+0·74	+0·37	—0·01	—0·03	—0·28	—4·13	—3·56	—5·99	—3·78	—0·12	—0·14	—0·08	—17·01
	Deoli	+0·61	+0·13	+0·16	—0·12	—0·87	—3·18	—4·18	—2·21	—4·45	—0·38	—0·14	—0·18	—14·81
	Kotah	+0·24	—0·21	+0·21	+0·11	—0·79	—2·21	—0·10	—1·20	—4·24	—0·11	—0·17	—0·25	—8·00
	Jhalrapatan	+0·07	+0·54	—0·07	+0·02	—0·27	—4·31	—2·94	+6·33	—5·57	—0·93	—0·26	—0·43	—7·82
	Ajmer	+1·05	—0·31	—0·13	—0·09	—0·18	—1·46	—1·61	—3·28	—2·86	+0·31	—0·21	—0·25	—9·02
	Nasirabad	+1·31	—0·33	+0·18	—0·03	—0·07	—1·06	—1·90	+2·92	—2·62	—0·03	—0·19	—0·28	—2·07

TABLE XXV.—*Comparison of the monthly and total rainfall (in inches) in 1901, with the averages of past years*—contd.

PROVINCE.	STATION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
		Inches.	Inches.	Inches.	Inch.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inch.	Inches.
RAJPUTANA—*concld.*	Malpura	+0·87	+0·04	+0·15	−0·01	−0·10	−1·27	+3·00	−5·88	−2·15	+0·13	−0·03	−0·28	−5·62
	Beawar	+0·26	−0·11	+0·02	−0·12	−0·26	+0·13	−2·01	−4·00	−2·64	+0·29	−0·19	−0·24	−8·87
	Jodhpur	−0·21	−0·16	−0·03	−0·05	−0·47	−1·21	+1·30	−2·79	−2·05	−0·05	−0·12	−0·08	−5·92
CENTRAL INDIA	Pachpadra	−0·25	−0·07	−0·10	−0·04	−0·73	−1·75	−2·17	−2·74	−2·33	−0·06	−0·09	−0·04	−10·73
	Jasol	−0·03	−0·05	−0·10	−0·02	−0·56	−1·89	−0·99	−3·43	−1·56	−0·01	−0·21	+0·17	−8·68
	Barmer	−0·09	−0·07	−0·01	−0·01	−1·42	−1·81	−1·55	−2·44	−1·91	−0·04	−0·14	+0·09	−8·46
	Pali	+0·54	−0·03	−0·12	0	−0·31	−2·65	−2·72	−2·94	−1·58	−0·11	−0·29	−0·10	−10·31
	Shahpura	+0·69	−0·17	+0·24	−0·02	−0·57	−2·94	+0·23	−2·90	−4·14	−0·06	−0·12	−0·23	−9·99
	Erinpura	+0·17	−0·23	−0·06	−0·03	−0·36	−2·05	−3·95	−1·12	−1·69	−0·32	−0·20	−0·13	−9·97
	Sirohi	0	−0·15	−0·09	−0·02	−6·77	−3·96	−6·85	−2·54	−3·37	−0·04	−0·25	−0·06	−18·19
	Mount Abu	+0·24	−0·17	−0·02	−0·03	−0·45	−2·54	−7·10	−7·50	−4·46	−0·65	−0·16	−0·11	−22·95
	Kotra	−0·13	−0·22	−0·04	−0·03	−0·15	−3·61	−7·88	−3·08	−5·38	−0·58	−0·20	−0·14	−21·44
	Udaipur	+0·05	−0·15	−0·08	−0·05	+0·19	−2·88	−2·47	+0·29	−3·27	−0·44	−0·21	−0·16	−9·18
	Partabgarh	−0·23	−0·08	−0·01	−0·01	−0·35	−6·01	−5·18	−3·46	−4·25	−0·59	−0·31	−0·27	−20·75
	Kherware	−0·01	−0·17	+0·12	−0·02	−0·38	−4·26	−4·19	−2·94	−4·45	+0·10	−0·16	−0·10	−16·46
	Banswara	−0·12	−0·11	−0·01	−0·01	−0·29	−5·09	−3·67	+0·24	−8·53	−0·74	−0·26	−0·35	−18·94
	Neemuch (Obsy.)	−0·11	−0·13	−0·03	+0·11	−0·46	−4·08	−4·46	−3·88	−4·49	−0·05	−0·18	−0·27	−18·03
	Sirdarpore	−0·18	−0·18	−0·03	+0·22	−0·17	−2·17	−4·18	+1·93	−6·97	−1·07	−0·23	−0·16	−13·19
	Agar	+0·75	−0·30	+0·01	−0·06	−0·27	−4·94	−3·99	+2·82	−5·36	−0·47	−0·20	−0·41	−12·42
	Rutlam	+0·08	−0·17	+0·09	+0·08	−0·05	−4·60	−3·47	−1·42	−7·17	−0·98	−0·26	−0·23	−18·10
	Indore	+0·48	−0·26	+0·06	−0·03	+0·26	−4·95	−2·17	+1·72	−6·23	−0·97	−0·28	−0·20	−12·57
	Bhopal (Sehore)	+2·08	+0·08	+1·80	+0·27	−0·30	−5·94	−6·97	+3·77	−8·03	−1·26	−0·43	−0·84	−15·77
	Goona	+0·52	−0·09	+0·24	+0·08	−0·41	−5·72	+1·58	+5·31	−5·23	−0·32	−0·39	−0·34	−4·77
	Morar	+0·90	+0·09	−0·17	−0·10	−9·30	−1·76	−2·77	+4·15	−3·98	−0·40	−0·04	+0·04	−4·34
	Nowgong	+1·34	+2·59	−0·02	−0·05	−0·18	−5·13	−8·46	+7·20	−2·20	−1·16	−3·19	−0·48	−6·74
	Sutna	+1·04	−0·02	−0·29	−0·04	−0·09	−5·94	−5·21	+8·00	+2·93	−2·15	−0·30	−0·37	−2·44
	Nagode	+1·66	+0·28	−0·19	−0·13	−0·39	−5·59	−10·30	+9·56	+2·66	−1·85	−0·19	+0·47	−4·95
	Maihar	+1·42	−0·24	−0·30	+0·61	−0·37	−6·96	+0·64	+3·48	+8·52	−2·25	−0·53	−0·54	+3·48
	Rewah	+1·17	+0·80	−0·24	−0·22	−0·11	−6·35	+0·83	+7·92	+5·65	−2·42	−0·33	−0·33	+6·37
	Ramnagar	+1·12	+0·20	−0·07	+0·34	+0·29	−7·22	+2·34	+11·24	+0·45	−2·43	−0·37	−0·59	+4·72
	Sihawal (Bardi)	+1·04	+1·81	−0·69	−0·07	−0·37	−5·68	−3·96	+7·79	+5·08	−1·93	−0·60	−0·45	+1·98
	Tyonthar	+1·30	+0·31	+0·93	−0·06	−0·38	−5·51	+9·04	+17·01	+6·65	−2·52	−0·22	−0·43	+26·12
	Sohagpur	+0·99	+3·08	−0·04	+0·64	−0·25	−5·85	+3·65	+11·97	+8·91	−2·32	−0·97	−0·53	+19·27

TABLE XXV.—*Comparison of the monthly and total rainfall (in inches) in 1901, with the averages of past years*—contd.

Province.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
		Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inch.	Inch.	Inches.
United Provinces.	Chakrata . .	+7·36	+3·30	−0·51	−1·34	+1·19	−6·20	+1·49	+ 7·17	− 3·13	−0·85	−0·38	+0·24	+ 8·34
	Mussooree .	+0·82	−0·56	+0·10	−1·15	+0·81	−7·79	+5·44	+19·70	− 8·02	−0·36	−0·40	−0·19	+ 8·40
	Srinagar . .	+1·46	+0·36	−0·21	−0·80	+0·23	−3·91	−0·89	+ 6·32	− 1·74	+1·52	−0·26	+0·02	+ 2·10
	Pauri . .	+2·17	+1·13	−0·07	−1·17	−0·35	−3·81	−0·35	+ 9·63	− 2·48	−0·83	−0·31	+0·14	+ 3·70
	Ranikhet .	+1·40	+1·27	+0·15	−1·05	−0·42	−5·26	−1·74	+ 5·67	− 1·66	−0·08	−0·28	+0·29	− 1·71
	Almora . .	+0·46	+1·91	+1·15	−0·82	−0·10	−5·32	+4·49	+ 6·50	− 1·09	−0·77	−0·21	+0·94	+ 7·14
	Pithoragarh .	+2·05	+0·42	−1·56	−1·43	−0·16	−5·44	+0·32	+ 3·52	+ 1·81	−1·46	−0·15	+0·83	− 1·25
	Naini Tal .	+7·34	+2·09	−0·40	−0·25	−1·10	−11·04	+2·90	+23·25	− 1·26	+5·16	−0·24	+0·51	+26·96
	Dehra Dun .	+2·63	+1·15	+0·09	−0·60	+0·29	−7·45	−9·37	+26·07	− 2·51	−0·17	−0·21	−0·20	+ 9·72
	Saharanpur .	+1·43	+1·07	+0·30	−0·34	+0·51	−3·49	+2·05	+ 6·89	− 3·59	+0·51	−0·23	−0·16	+ 4·95
	Roorkee . .	+1·67	+1·14	+0·08	−0·31	+0·12	−4·07	+1·52	+ 3·11	− 5·22	+0·14	−0·25	−0·05	− 2·12
	Muzaffarnagar .	+0·64	+0·23	+0·45	−0·37	−0·57	−2·84	−1·49	+ 3·14	− 2·13	+0·71	−0·12	−0·26	− 2·61
	Bijnor . .	+1·28	−0·19	+0·46	−0·44	−0·52	−4·41	+2·89	+ 8·86	− 5·21	+0·33	−0·14	+0·09	+ 3·00
	Meerut . .	+1·74	+0·27	−0·23	−0·34	−0·73	−3·20	+0·53	+ 4·04	− 2·49	−0·46	−0·09	−0·25	− 1·21
	Moradabad .	+2·93	+1·68	−0·07	−0·17	−0·61	−3·66	−7·47	+12·05	− 4·00	−0·45	−0·11	+0·24	+ 0·36
	Rudarpur .	+1·68	+0·20	−0·41	−0·23	+0·37	−3·79	−5·33	+10·56	+ 4·81	−0·68	−0·08	+0·82	+ 7·92
	Pilibhit . .	+1·66	+0·50	−0·24	−0·29	+0·13	−4·05	−6·22	− 0·40	+ 5·44	−1·21	−0·10	+0·17	− 4·61
	Bulandshahr .	+1·17	−0·58	−0·28	−0·27	−0·54	−1·26	−2·64	+ 5·25	− 4·04	−0·45	−0·08	−0·24	− 3·96
	Bareilly . .	+1·18	+0·31	−0·15	−0·24	−0·44	−4·23	−5·62	+ 7·27	− 0·62	−1·08	−0·11	+0·27	− 3·46
	Budaun . .	+0·79	+0·45	−0·36	−0·14	−0·44	−1·50	−4·40	+ 0·42	− 3·54	−0·90	−0·11	+0·21	− 9·52
	Shahjahanpur .	+1·46	−0·10	−0·35	−0·15	−0·89	−3·58	+2·04	+ 2·40	+ 1·77	−1·17	−0·14	+0·29	+ 1·58
	Aligarh . .	+0·37	+0·63	−0·34	−0·17	−0·46	−2·48	−4·82	+ 0·18	− 4·29	−0·38	−0·04	−0·24	−12·04
	Muttra . .	+0·39	+1·00	−0·25	−0·17	−0·51	−2·62	−5·30	− 1·92	− 4·00	−0·22	−0·06	−0·18	−13·84
	Agra . .	+0·62	+0·29	+0·02	−0·15	−0·28	−1·97	−6·56	+ 2·15	− 3·94	−0·21	−0·06	−0·07	−10·16
	Etah . .	+1·06	+0·32	−0·35	−0·08	−0·34	−2·59	−6·25	+ 1·65	− 4·61	−0·84	−0·05	+0·13	−11·95
	Mainpuri .	+1·70	+0·25	−0·21	−0·11	−0·47	−3·15	−6·27	+ 1·78	− 4·97	−0·84	−0·11	+0·46	−11·94
	Farrukhabad .	+1·37	+0·50	−0·27	−0·09	−0·54	−3·20	−2·57	+ 4·32	− 4·08	−0·34	−0·09	+0·10	− 4·89
	Etawah . .	+1·05	+0·42	−0·40	−0·12	−0·36	−2·68	−3·49	+ 5·77	− 1·83	−0·78	−0·09	+0·05	− 2·46
	Cawnpore .	+0·30	+1·25	+0·01	−0·13	−0·45	−3·54	−2·92	− 1·14	+ 1·37	−1·27	−0·14	−0·17	− 6·83
	Fatehpur .	+1·70	+1·29	−0·10	+0·27	−0·20	−3·89	−2·49	+ 9·09	− 0·85	−1·62	−0·18	−0·26	+ 2·76
	Jalaun (Orai) .	+0·74	+0·98	−0·17	−0·05	−0·27	−2·87	−5·99	+ 5·41	− 4·70	−0·60	−0·05	−0·23	− 7·80
	Hamirpur .	+1·24	+2·74	−0·11	−0·09	−0·29	−4·19	−4·36	+ 7·15	+ 0·72	−1·11	−0·18	−0·30	+ 1·22
	Banda . .	+1·69	+0·49	−0·25	−0·11	−0·37	−4·07	−3·75	+ 3·40	− 0·12	−1·49	−0·39	−0·24	− 5·21
	Allahabad .	+2·27	+0·71	−0·06	−0·12	−0·26	−5·09	−5·62	+ 1·71	+ 3·94	−2·49	−0·26	−0·22	− 5·49
	Basti . .	+2·20	+0·99	−0·31	−0·23	−0·03	−5·72	−2·75	+ 1·09	− 5·45	−2·86	−0·66	−0·11	−13·24
	Gorakhpur .	+1·74	+0·54	−0·27	−0·35	+2·54	−6·20	+3·03	− 1·84	+ 4·15	−3·40	−0·10	−0·11	− 0·27

TABLE XXV.—*Comparison of the monthly and total rainfall (in inches) in 1901, with the averages of past years*—contd.

Province.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December	Total.
		Inches.	Inches.	Inch.	Inch.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inch.	Inch.	Inches.
United Provinces—*concld.*	Azamgarh	+2·72	+0·89	+0·26	+0·21	+0·49	−5·39	−0·31	− 2·76	+1·72	−1·96	−0·11	−0·14	− 4·38
	Jaunpur	+1·46	+1·11	+0·24	−0·12	−0·58	−5·05	−4·72	− 1·77	−2·08	−3·19	−0·14	−0·12	−14·96
	Benares	+2·41	+0·99	+0·86	−0·13	−0·38	−5·13	−7·70	+ 3·97	−0·39	−2·15	−0·19	−0·14	− 7·98
	Mirzapur	+3·16	+0·78	−0·06	−0·13	−0·31	−4·32	−8·35	+ 0·84	−1·33	−2·12	−0·29	−0·15	−12·28
	Ballia	+1·53	+1·20	+0·29	−0·24	+0·47	−4·71	+3·82	+ 2·14	−1·85	−2·71	−0·20	−0·12	− 0·38
	Dudhi	+2·45	+0·43	+0·28	+0·27	−0·62	−3·36	−2·45	− 2·36	−1·22	−1·05	−0·31	−0·28	− 9·02
	Robertsganj	+2·94	+0·95	−0·23	−0·17	−0·67	−5·16	−6·65	+ 1·07	−0·28	−2·52	−0·42	−0·23	−12·37
	Jhansi	+1·42	+0·90	−0·18	+0·31	−0·11	−4·70	−1·35	+15·74	−4·87	−0·72	−0·07	−0·17	+ 6·20
	Lalitpur	+0·21	+0·43	−0·34	+0·16	−0·55	−5·03	+1·29	+16·31	−2·77	−1·00	−0·19	−0·38	+ 8·14
Oudh	Kheri	+2·08	−0·02	−0·11	+0·08	−0·62	−3·81	−3·13	− 4·65	+8·10	−1·15	−0·17	+0·03	− 3·37
	Sitapur	+1·57	+0·21	−0·40	−0·28	−0·79	−4·78	−4·40	+ 0·66	+9·19	−1·47	−0·17	0	− 0·66
	Bahraich	+2·37	+0·09	−0·36	−0·33	−1·42	−3·22	−5·22	+ 1·88	+3·44	−1·84	−0·13	−0·19	− 4·93
	Gonda	+1·73	+0·32	−0·36	−0·15	−1·05	−6·08	−7·86	− 3·41	+1·67	−0·89	−0·10	−0·19	−16·37
	Hardoi	+1·40	+0·24	−0·39	−0·16	−0·24	−2·84	+1·42	− 2·95	+0·09	+0·01	−0·13	−0·03	− 3·58
	Nawabganj (Bara Banki).	+1·24	+1·84	−0·37	−0·17	+0·72	−5·14	−4·10	+ 4·18	+0·47	−0·93	−0·08	−0·35	− 2·69
	Lucknow	+0·76	+1·27	−0·25	−0·12	−0·67	−4·31	−2·50	− 1·80	+5·66	−1·08	−0·09	−0·39	− 3·52
	Unao	+0·22	+1·63	−0·31	−0·11	−0·30	−4·62	−2·22	+ 1·26	−0·38	−1·20	−0·10	−0·31	− 6·44
	Fyzabad	+0·82	+1·15	−0·48	−0·17	−0·64	−5·97	−4·24	− 7·49	+5·45	−2·10	−0·09	−0·22	−13·98
	Sultanpur	+1·69	+0·90	−0·14	−0·20	−0·43	−6·26	−6·33	− 6·72	+3·03	−2·41	−0·17	−0·23	−17·27
	Rae Bareli	+1·32	+0·94	−0·05	+0·17	−0·29	−4·97	−1·30	+ 0·33	−0·97	−1·47	−0·12	−0·22	− 6·63
	Partabgarh	+1·97	+0·86	+0·17	−0·30	−0·41	−5·12	−3·85	+ 0·90	+1·44	−2·49	−0·24	−0·28	− 6·99
Bengal	Motihari	+1·82	+0·14	+0·16	−0·60	+2·50	+1·68	−1·32	+ 2·66	−3·83	−3·22	−0·13	−0·13	− 0·27
	Darbhanga	+1·74	−0·37	+0·14	−0·59	+2·62	−0·20	−7·54	+ 3·61	−5·57	−2·74	+0·23	−0·12	− 8·79
	Siwan	+1·89	+0·15	−0·08	−0·21	+0·05	−3·79	+3·04	− 2·49	−2·84	−3·27	0	−0·11	− 7·66
	Buxar	+1·93	+1·00	+0·24	−0·15	+0·70	−5·03	−4·19	+ 2·63	−2·85	−2·32	−0·39	−0·18	− 8·61
	Chapra	+1·30	+0·44	+0·20	−0·31	+0·69	−5·17	−0·39	+ 2·73	−2·31	−0·94	−0·09	−0·09	− 3·94
	Arrah	+1·54	+0·97	+0·51	−0·44	+0·66	−6·28	−4·76	+ 4·50	−5·55	−2·73	−0·13	−0·13	−12·04
	Patna (Bankipore)	+1·58	+0·85	+0·12	−0·25	+1·09	−5·27	−3·04	− 2·46	−3·89	−2·67	−0·01	−0·15	−14·10
	Muzaffarpur	+1·03	−0·35	+0·11	−0·45	+1·83	−4·64	−4·96	+ 5·11	−1·19	−2·81	−0·13	−0·07	− 6·52
	Barh	+1·69	+0·10	+0·16	−0·15	−0·30	−4·86	+6·71	− 1·17	−1·18	−2·46	+0·86	−0·09	− 0·69
	Sasaram	+2·32	+1·53	+0·32	−0·15	−0·08	−5·09	−2·21	+ 3·19	+4·81	−1·81	−0·29	−0·21	+ 2·33
	Gaya	+2·54	+0·59	−0·23	−0·24	+1·09	−6·26	−2·43	+ 5·70	+3·70	−2·15	−0·18	−0·16	+ 1·97
	Jamui	+2·68	+0·12	−0·39	−0·41	+0·84	−5·55	−1·62	− 0·97	+1·77	−2·24	+0·51	−0·07	− 5·33
	Madhipura	+1·05	−0·60	−0·05	−0·91	−1·47	−4·60	− 2·78	+ 4·51	−6·28	− 3·49	+0·47	−0·06	−14·21
	Monghyr	+1·55	−0·47	−0·31	−0·47	−0·71	−1·45	−6·02	+ 4·21	−5·04	−3·20	+0·58	−0·08	−11·41
	Bhagalpur	+1·08	−0·49	−0·05	−0·66	+3·64	−4·56	−5·03	− 2·60	−2·98	−3·52	+0·67	−0·08	−14·58

TABLE XXV.—*Comparison of the monthly and total rainfall (in inches) in 1901, with the averages of past years*—contd.

Province.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
		Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inch.	Inches.
Bengal—*contd.*	Godda	+1·20	+0·03	—0·44	—0·51	— 0·79	— 1·34	— 3·11	+ 3·16	— 2·96	—1·91	+ 0·67	—0·10	— 6·10
	Palamau	+2·95	+1·46	—0·47	+0·20	— 0·89	— 4·10	— 4·68	— 2·20	+ 1·38	—1·92	— 0·32	—0·26	— 8·85
	Hazaribagh	+2·54	+1·98	—0·36	—0·29	+ 1·60	— 8·19	— 6·97	— 0·11	+ 3·70	—1·86	— 0·10	—0·20	— 8·26
	Ranchi	+2·28	+3·16	—1·20	+0·69	+ 0·41	— 6·74	— 2·00	+ 7·63	+ 1·81	—2·45	— 0·21	—0·18	+ 3·20
	Lohardaga	+4·07	+3·51	—0·72	+0·39	— 1·85	— 4·04	— 6·56	+ 3·85	+ 3·14	+1·97	— 0·60	—0·39	+ 2·77
	Naya Dumka	+0·91	+0·03	—0·52	—0·47	— 2·00	— 6·72	— 1·25	+ 0·40	— 3·83	—1·54	+ 0·50	—0·18	—14·67
	Gobindpur	+3·15	+0·53	—0·48	—0·23	— 1·15	— 5·29	+ 0·55	+ 2·81	+ 1·59	—0·06	+ 0·26	—0·16	+ 1·52
	Purulia	+3·23	+1·53	—0·68	+0·55	— 0·08	— 6·00	— 0·24	— 3·19	+ 3·70	+1·12	+ 0·48	—0·20	+ 0·22
	Sirguja	+1·33	+5·44	+0·64	—0·26	— 0·28	— 5·54	— 4·24	+ 4·59	+ 2·95	—1·53	— 0·65	—0·37	+ 2·08
	Jushpore	+4·17	+2·12	—0·56	—0·16	— 0·30	— 8·19	+ 0·35	+ 0·33	— 1·27	—1·60	— 0·52	—0·31	— 5·94
	Gangpur	+4·69	+5·84	—0·97	—0·68	— 0·98	—10·05	— 4·49	+10·19	— 8·45	—2·28	— 0·84	—0·36	— 8·38
	Chaibassa	+5·47	+3·11	—1·02	—0·36	— 2·07	— 6·81	— 1·18	+ 3·18	— 1·52	—2·00	+ 0·44	—0·27	— 3·03
	Barreepudda	+ ·28	+1·42	—0·47	+3·82	— 0·76	— 6·67	— 1·58	— 2·36	— 3·30	— 1·54	+ 2·18	—0·13	— 6·11
	Keonjhar	+2·94	+6·01	+0·11	0	+ 3·20	— 3·67	— 0·26	+ 7·38	— 0·23	—1·41	+ 0·19	—0·18	+14·08
	Jellasore	+1·58	+1·97	—0·79	+0·90	— 2·03	— 1·79	— 5·48	+ 0·44	— 4·06	—2·72	+ 4·99	—0·11	— 7·10
	Balasore	+1·06	+0·20	—1·19	+1·73	— 4·02	— 8·17	— 6·70	— 2·84	+ 8·77	—0·95	+ 2·75	—0·20	— 9·56
	Bhadrak	+3·55	+0·70	—0·32	—0·80	+ 3·23	— 2·24	— 0·16	— 1·73	+ 0·51	+1·09	+ 3·17	—0·27	+ 6·73
	Talcher	+3·26	+2·38	—0·44	+0·71	+ 3·45	— 7·32	+ 0·97	— 1·15	— 2·95	+0·29	— 0·43	—0·22	— 1·45
	Narsinghpur	+1·16	+2·31	—0·81	+1·93	+ 1·20	— 5·12	+ 6·08	— 0·02	— 2·02	—1·47	+ 0·44	—0·07	+ 3·61
	Angul	+1·42	+3·38	—0·80	+0·02	— 2·35	— 6·43	— 3·20	— 2·97	— 3·44	—3·08	— 0·10	—0·39	—17·94
	Dhenkanal	+0·55	+3·71	—1·28	+1·30	+ 0·53	— 9·03	+ 2·08	+ 6·47	— 5·26	—0·95	+ 1·16	—0·30	— 1·02
	Bispara	+0·56	+2·66	—0·67	+2·22	+ 2·00	— 7·68	+ 0·74	+ 2·09	— 3·79	—2·96	— 0·19	—0·30	— 5·32
	Kunjabangar	+0·89	+2·01	—0·12	+2·75	— 0·48	— 7·76	— 1·21	+ 0·53	— 6·11	—3·53	+ 1·00	—0·13	—12·16
	Banki(Charchika)	+0·52	+1·45	—1·20	+2·72	+ 0·18	— 7·73	— 2·56	+0·66	— 3·57	—2·36	+ 1·63	—0·44	—10·70
	Cuttack	+0·95	+2·30	—1·27	—0·31	— 0·33	— 7·33	+ 0·38	— 5·03	— 3·76	—3·11	+ 2·10	—0·38	—15·79
	Baramba	+0·53	+1·39	—1·02	+5·87	— 1·56	— 8·58	— 1·02	— 1·84	— 1·90	—1·42	+ 0·62	—0·03	— 8·96
	False Point	+1·58	+2·34	—0·82	—1·56	— 4·46	— 7·33	— 4·98	— 5·46	— 2·99	—3·87	+15·73	—0·52	—12·34
	Puri	+1·44	+1·26	—0·36	—0·52	+ 0·76	— 7·05	— 5·80	— 6·25	— 2·27	—1·63	+ 8·52	—0·60	—12·50
	Darjeeling	+0·92	—1·04	+0·32	—2·59	+ 0·93	— 4·52	+ 0·83	+ 0·64	— 7·89	—0·50	+ 0·19	—0·07	—13·08
	Gantak	+1·34	—2·19	+1·23	+0·73	—11·96	+ 9·27	— 0·48	— 1·66	— 9·45	—3·79	+ 3·42	+1·09	—12·45
	Mongpoo	+0·61	—0·68	—0·28	—2·51	— 1·42	— 3·23	— 6·82	— 3·00	—10·31	—2·77	+ 0·32	+0·09	—30·00
	Pedong	+0·34	—1·03	—0·73	—0·73	— 3·49	+ 6·85	— 5·63	+ 1·60	— 8·36	—2·19	+ 0·57	+0·51	—12·29
	Buxa	+0·59	—0·70	—1·55	—5·64	— 6·41	— 9·48	—13·34	— 8·39	—15·39	—5·36	+ 0·37	—0·22	—65·52
	Jalpaiguri	+0·01	+0·51	—0·88	—3·26	— 2·80	— 5·90	+ 8·59	+ 5·87	—16·72	—4·16	+ 0·35	+0·18	—18·21
	Cooch Behar	+0·26	+0·93	—0·98	—1·78	— 7·40	— 2·49	— 7·04	+ 7·43	— 6·40	—3·85	+ 0·48	—0·07	—20·91
	Kishanganj	+0·42	+0·30	+0·18	—0·76	— 2·69	— 9·43	+ 1·31	+ 7·70	—10·70	—1·06	+ 0·11	—0·11	—14·73

TABLE XXV.—*Comparison of the monthly and total rainfall (in inches) in 1901, with the averages of past years*—contd.

Province.	Station.	January	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
		Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inch.	Inches.
Bengal—*concld.*	Purnea . .	+0·80	+0·31	+0·25	—1·36	— 2·26	— 5·97	— 3·25	+0·97	— 7·48	— 3·40	+0·59	—0·11	—20·91
	Rangpore .	+0·34	—0·40	—0·94	—2·59	— 1·39	— 1·23	— 5·91	—3·95	— 2·93	— 3·28	+0·53	—0·09	—21·84
	Dinajpore .	+0·65	—0·55	—0·63	—1·33	— 4·53	— 5·45	— 4·23	—3·78	— 2·24	— 2·38	+0·66	—0·08	— 23·89
	Malda . .	+0·99	—0·67	—0·77	—0·46	+ 0·90	— 2·80	— 3·64	+0·91	— 0·45	— 2·56	+1·26	—0·27	— 7·56
	Bogra . .	—0·33	—0·70	—0·78	—2·90	— 0·38	+ 4·46	— 3·11	—1·30	+ 9·70	— 2·99	+3·39	—0·09	+ 4·97
	Rampur Boalia .	+0·35	—0·53	— 1·04	—0·61	+ 1·89	— 0·05	— 7·51	—4·67	+10·76	— 1·02	+2·07	—0·07	— 0·43
	Pubna . .	+0·19	—0·36	—1·31	+0·16	+ 1·57	+ 5·80	+ 3·17	—5·79	+ 9·29	— 1·44	+1·95	—0·08	+13·15
	Suri . .	+0·50	—0·02	—0·30	+0·88	+ 0·15	— 2·77	— 0·96	—4·32	— 3·33	— 1·66	+2·01	—0·13	— 9·95
	Bankura . .	+1·56	+2·23	—1·17	—0·09	— 1·17	— 3·09	+ 0·50	—3·97	+ 5·62	— 2·34	+0·78	—0·14	— 1·28
	Burdwan . .	+0·66	+1·21	—1·33	+0·41	— 0·92	— 3·50	— 1·22	—3·11	+ 0·56	— 3·88	+2·47	—0·13	— 8·78
	Hooghly . .	+0·65	—0·12	—1·59	+0·22	+ 1·69	— 3·86	— 4·39	+1·66	+ 8·99	— 1·81	+2·06	—0·20	+ 3·30
	Howrah . .	+1·01	+0·47	—1·60	+0·50	— 0·84	— 1·56	— 1·52	—1·34	+ 8·93	— 2·23	+2·17	—0·20	+ 3·79
	Midnapore .	+3·01	+4·55	0	+2·29	— 1·02	— 3·47	— 1·53	+4·99	+ 1·53	— 2·45	+4·44	—0·21	+12·13
	Tamluk . .	+1·86	+1·97	—1·65	+1·80	— 0·30	+ 1·01	— 3·83	—2·24	+ 6·13	+ 0·31	+3·22	—0·20	+ 8·08
	Berhampore .	+0·15	—0·37	—0·60	—0·37	+ 0·84	— 1·94	— 4·55	—4·11	— 1·10	— 3·35	+2·48	—0·10	—13·02
	Krishnagar .	+0·36	+0·24	—1·01	+1·39	+ 1·35	— 3·49	— 2·35	—1·58	+ 3·63	— 0·98	+2·83	—0·12	+ 0·27
	Faridpur . .	+0·01	—0·78	—2·05	+1·93	— 2·76	+ 6·01	— 2·93	—4·62	+ 5·87	— 0·22	+2·07	—0·09	+ 2·44
	Jessore . .	+0·03	+0·20	—1·92	+0·68	+ 0·35	— 1·81	— 0·20	—4·77	+ 4·51	— 4·69	+1·38	—0·15	— 6·39
	Basirhat . .	+0·40	+0·25	—1·72	+1·82	— 1·18	+ 2·55	— 0·97	—0·67	+ 6·33	— 2·48	+2·52	—0·16	+ 6·69
	Khulna . .	—0·42	—0·46	—1·92	+2·13	— 0·54	— 4·04	— 6·26	—3·38	+ 2·27	+ 2·84	+2·38	—0·23	— 7·63
	Barisal . .	—0·33	—0·05	+0·05	+2·09	— 4·87	+ 4·25	— 7·13	—4·40	+ 7·48	— 1·76	+4·92	—0·32	— 0·07
	Alipore (Obsy.)	+0·99	+0·84	—1·30	+0·07	+ 0·59	— 2·04	+ 1·04	+0·80	+10·02	— 1·71	+2·13	—0·37	+11·06
	Saugor Island .	+0·33	+2·01	—1·18	+2·94	— 3·23	— 0·95	+ 2·51	—1·11	— 2·45	— 2·85	+4·70	—0·24	+ 0·48
	Mymensingh .	—0·04	—0·04	—0·89	—2·97	+ 4·68	+12·33	— 1·43	+0·59	+29·51	+ 0·12	+6·39	—0·09	+48·56
	Kishorganj .	+0·57	—0·72	—2·28	+0·14	— 0·77	+ 9·79	— 2·81	—1·78	+ 9·04	— 0·22	+1·67	—0·23	+12·40
	Atia (Tangail) .	+0·45	—0·80	—1·34	—1·14	— 2·07	+ 3·90	— 4·36	—3·18	+15·71	— 3·10	+2·60	—0·09	+ 6·58
	Dacca . .	—0·11	—0·60	—2·28	— 2·50	— 2·78	+22·63	— 8·94	—1·02	+ 8·31	— 3·35	+1·46	—0·19	+10·63
	Comilla . .	—0·26	—0·41	—2·47	—3·09	— 7·64	+11·78	—12·80	—6·88	+ 6·16	+ 0·65	+1·45	—0·24	—13·75
	Agartalla .	—0·62	—1·09	—4·00	+0·43	— 8·89	+17·63	— 8·52	—7·01	— 3·43	+ 0·87	+1·46	—0·34	—13·51
	Noakhali .	—0·45	+0·04	—2·83	+1·30	— 6·44	+ 5·45	— 4·43	+1·53	+17·54	— 0·77	+4·20	—0·39	+14·75
	Demagiri .	—0·22	—0·44	—2·85	+3·64	—10·20	+ 6·27	— 5·01	—3·42	— 7·98	+ 4·02	+0·05	—0·74	—16·88
	Rangamatia Hills	—0·48	—1·05	—3·33	—0·94	— 7·70	— 0·05	— 6·18	—9·01	+ 0·08	+ 2·25	+1·54	—0·54	—25·41
	Chittagong .	—0·40	—1·17	—1·99	—0·15	— 8·51	— 2·08	— 6·77	—9·35	+ 6·52	+ 5·27	+2·41	—0·62	—16·84
	Cox's Bazar .	—0·54	—0·13	—1·03	+0·36	— 8·10	+17·10	—14·00	—7·44	+12·07	+17·81	+1·37	—0·33	+17·14
Assam	Sylhet . .	+0·24	—1·40	—4·70	—3·54	—14·25	+11·55	— 7·19	—4·04	+ 2·98	+16·73	+2·12	—0·27	— 1·77
	Silchar . .	—0·45	—2·30	—7·41	+2·68	— 9·98	— 0·51	— 0·18	—0·69	+ 1·33	— 0·88	+1·75	—0·58	—17·22

TABLE XXV.—*Comparison of the monthly and total rainfall (in inches) in 1901, with the averages of past years*—contd.

Province.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
		Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inch.	Inches.
Assam—*concld.*	Chera Poonjee .	+0·82	—1·81	—6·90	+12·34	—25·23	—25·23	—42·52	—24·69	—7·44	+19·22	+10·30	— 0·26	—91·40
	Tura . .	0	—0·60	—1·95	— 4·69	— 4·47	— 2·11	+ 5·49	— 2·99	—2·91	— 1·19	+ 4·97	— 0·13	—10·58
	Shillong . .	—0·31	—0·85	—1·61	— 1·23	— 2·17	+ 1·51	— 6·95	+ 1·09	+ 1·14	+ 5·78	+ 2·72	— 0·27	— 1·15
	Dhubri . .	+0·86	—0·70	—1·12	— 2·68	— 7·27	+ 0·49	— 9·92	— 0·27	—4·97	— 1·69	+ 2·38	— 0·15	—24·54
	Goalpara . .	+0·76	—0·22	—1·77	— 3·91	— 3·24	+ 9·62	— 3·20	+ 3·02	—4·67	— 3·43	+ 2·49	— 0·22	— 4·77
	Kulsi . .	+0·04	—0·37	—1·51	— 0·20	— 4·74	— 0·33	+ 0·16	+13·93	—2·95	+ 1·76	+ 4·82	— 0·37	+10·24
	Gauhati . .	+0·31	—0·87	—1·38	+ 0·27	— 7·14	+ 1·54	— 3·21	— 1·52	—1·06	+ 0·69	+ 3·19	+ 0·17	— 9·01
	Nowgong .	—0·58	—0·79	—1·87	— 0·03	— 5·98	— 7·29	— 4·13	+ 4·38	—4·12	+ 5·30	+ 4·82	— 0·17	—10·46
	Tezpur . .	+0·19	—0·83	—1·32	+ 0·54	— 3·37	— 0·73	— 5·55	+ 7·21	—2·96	+ 0·25	+ 4·93	— 0·52	— 2·16
	Charduer .	+0·21	—0·57	—1·59	— 3·14	— 7·55	— 2·90	+ 5·14	+ 1·67	— 6·77	— 1·34	+ 4·37	— 0·62	—12·91
	Sibsagar . .	+0·42	—0·54	—4·10	— 2·43	— 2·90	+ 1·53	— 0·28	— 1·06	—0·12	+ 2·08	+ 4·71	— 0·41	— 3·10
	Dibrugarh .	+0·96	+0·75	—4·08	+ 3·70	— 7·72	+ 3·84	— 4·15	— 0·64	+2·83	— 0·25	+ 3·49	— 0·71	— 1·98
	Kohima . .	+0·24	—0·71	—0·56	— 0·67	— 1·99	— 5·75	— 2·29	+ 3·96	+4·51	+ 4·24	+ 2·00	— 0·22	+ 2·76
Central Provinces.	Saugor . .	+2·21	—0·35	+0·61	— 0·17	— 0·29	— 6·17	— 0·32	+11·72	—4·24	— 0·77	— 0·36	— 0·57	+ 1·30
	Damoh . .	+1·12	—0·31	+0·34	— 0·13	— 0·16	— 5·44	— 1·22	+12·15	—1·69	— 1·63	— 0·34	— 0·45	+ 2·24
	Jubbulpore .	+1·60	+0·63	+0·01	+ 0·10	— 0·42	— 7·31	— 7·95	+19·89	—3·36	— 1·03	— 0·40	— 0·26	+ 1·50
	Narsinghpur .	+1·74	—0·20	+0·17	+ 0·03	— 0·31	— 4·73	— 1·34	+ 8·44	—4·69	— 1·57	— 0·27	— 0·38	— 3·11
	Hoshangabad .	+1·79	+0·16	—0·12	+ 0·10	— 0·47	— 4·64	— 0·66	+ 9·13	—7·23	— 0·96	— 0·43	— 0·47	— 3·80
	Khandwa . .	+1·16	—0·22	+0·03	— 0·64	— 0·30	— 3·93	— 3·75	— 1·48	—5·41	— 1·00	— 0·17	— 0·42	—15·53
	Badnur (Betul) .	+4·03	—0·09	+2·34	+ 0·18	— 0·27	— 0·86	+ 4·07	+ 4·30	—6·22	— 1·70	— 0·42	— 0·52	+ 4·84
	Pachmarhi .	+2·93	+0·16	+1·01	+ 1·00	— 0·48	— 7·60	— 3·69	+20·41	—4·99	— 1·66	— 0·47	— 0·58	+ 6·04
	Chhindwara .	+1·40	+2·13	+0·39	+ 0·30	+ 0·34	— 4·87	+ 4·05	+ 3·27	—4·19	— 1·47	— 0·46	— 0·36	+ 0·53
	Seoni . .	+1·73	+0·29	+1·04	+ 1·11	+ 0·13	— 6·56	— 1·56	+ 7·54	—1·11	— 1·65	— 0·47	— 0·61	— 0·12
	Balaghat . .	+1·05	+1·55	+1·06	+ 0·09	— 0·55	— 8·06	— 3·30	+10·24	—2·35	— 2·11	— 0·55	— 0·25	— 3·18
	Mandla . .	+0·83	+0·95	+0·45	— 0·34	+ 0·27	— 5·88	— 3·31	+ 7·85	—0·13	— 1·18	— 0·31	— 0·34	— 1·14
	Bilaspur . .	+0·82	+3·36	+1·18	— 0·47	— 0·22	— 7·38	+ 0·74	+ 2·08	+0·60	— 1·60	— 0·60	— 0·29	— 1·78
	Sarangarh .	+2·71	+4·90	+0·64	— 0·17	— 0·55	— 8·03	— 8·32	+ 2·34	—3·73	— 2·69	— 0·79	— 0·16	—13·85
	Raigarh . .	+3·48	+3·60	+1·70	+ 0·08	— 0·44	— 8·41	— 4·35	+ 2·10	—2·22	— 0·95	— 0·39	— 0·23	— 6·03
	Sambalpur .	+0·16	+4·39	—00·5	+ 0·94	— 0·75	— 9·65	— 4·86	+12·80	—1·05	— 0·84	— 0·22	— 0·27	+ 0·60
	Raipur . .	+0·39	+4·41	—0·06	— 0·15	+ 0·55	— 3·47	+ 0·13	+ 2·52	—2·65	— 1·38	— 0·69	— 0·22	— 0·62
	Dhamtari . .	+0·83	+7·43	+0·19	— 0·14	— 0·71	— 7·03	+ 0·84	+ 3·19	—4·02	+ 0·28	— 0·41	— 0·13	+ 0·32
	Bhandara . .	—0·21	+2·11	+1·05	+ 0·05	— 0·15	— 5·83	— 2·70	+15·25	—3·46	— 1·72	— 0·77	— 0·36	+ 3·26
	Nagpur . .	+0·36	+0·65	+0·38	+ 2·01	— 0·13	— 2·75	— 5·59	+ 4·11	—4·27	— 2·29	— 0·55	— 0·46	— 8·53
	Arvi . .	+2·13	+0·28	+0·08	— 0·18	— 0·29	— 0·76	— 4·36	+ 6·94	—2·88	— 2·51	— 0·40	— 0·42	— 2·37
	Wardha . .	+0·57	+1·92	—0·12	+ 0·41	— 0·46	— 2·02	— 4·40	+ 7·65	—1·07	— 1·17	— 0·63	— 0·38	+ 0·30
	Brahmapuri .	+0·19	+4·00	+0·43	+ 0·77	— 0·36	— 3·41	— 0·74	+19·98	—0·92	— 2·20	— 0·62	— 0·41	+16·71

TABLE XXV.—*Comparison of the monthly and total rainfall (in inches) in 1901, with the averages of past years*—contd.

Province.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
		Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inch.	Inches.
Central Provinces —*concld.*	Chanda	+0·51	+0·68	+0·10	+0·32	−1·20	− 3·21	+ 0·73	+ 4·38	+ 0·97	−0·79	−0·82	−0·33	+ 1·34
	Sironcha	+0·60	+3·65	−0·28	+3·61	−1·26	+ 1·05	+ 0·19	− 0·81	− 1·80	−1·78	−0·70	−0·26	+ 2·22
	Baster (Jagadalpore)	+1·26	+2·17	−0·58	−1·34	+2·14	− 7·28	− 4·18	+ 1·22	− 6·80	−0·57	−0·76	−0·23	−14·95
Berar	Chikalda	+1·58	−0·16	−0·14	+0·56	+0·05	− 5·92	+ 2·18	+ 4·20	− 7·40	−1·42	−0·74	−0·87	− 8·08
	Ellichpur	+1·10	−0·24	−0·17	−0·14	+0·47	+ 1·22	− 0·83	+ 0·18	− 3·43	−1·92	−0·62	−0·56	− 4·94
	Amraoti	+2·15	−0·16	+0·05	+0·17	−0·61	− 3·38	− 5·78	+ 7·00	− 1·90	−1·59	−0·40	−0·49	− 4·94
	Akola	+0·87	−0·11	+0·63	+0·04	−0·33	− 0·49	− 3·42	+ 4·13	− 4·87	−0·43	−0·49	−0·68	− 5·12
	Buldana	+0·99	−0·24	+1·21	−0·04	−0·50	+ 1·27	+ 2·67	+ 5·30	− 4·17	+3·78	−0·53	−0·50	+ 9·24
	Basim	+2·41	−0·17	−0·14	+0·43	−0·11	− 1·81	+ 1·25	+ 6·63	− 5·31	+0·39	−0·85	−0·50	+ 2·22
	Yeotmal	+1·72	+1·16	+0·26	+0·56	−0·67	− 2·68	− 5·50	+ 7·16	− 2·73	−0·25	−0·63	−0·43	− 2·03
	Wun	+1·33	+1·87	+1·30	+1·01	+0·40	− 0·42	− 0·20	+ 4·60	+ 0·40	−0·23	−0·82	−0·33	+ 8·91
Bombay	Dhulia	−0·08	−0·06	+0·36	−0·06	−0·31	+ 0·90	− 1·04	− 0·73	− 3·85	+1·81	−0·69	−0·35	− 4·10
	Nasik	+0·11	−0·04	−0·04	+0·14	−0·56	− 3·28	− 3·16	+ 0·34	− 2·65	−2·94	−0·53	−0·24	−12·85
	Igatpuri	+0·24	−0·08	−0·03	+1·23	−0·78	− 8·55	+ 1·63	+ 8·21	− 7·25	−3·04	−0·36	−0·19	− 8·97
	Malegaon	+0·52	−0·12	+0·04	−0·11	+0·25	+ 1·36	− 1·99	− 2·01	− 5·33	+1·00	−0·49	−0·39	− 7·27
	Ahmednagar	+0·82	−0·14	+0·09	+0·88	−1·14	+ 3·05	− 1·87	− 2·38	− 4·47	−1·63	−0·97	−0·48	− 8·24
	Poona	+0·02	−0·05	−0·06	+0·57	+1·50	+ 0·28	− 0·34	+ 1·41	− 0·56	−1·77	−0·90	−0·22	− 0·12
	Lonavla	+0·45	−0·05	−0·07	−0·07	+0·24	− 6·62	+20·73	+49·52	−12·85	−2·87	−0·79	−0·18	+47·44
	Satara	−0·21	−0·10	+0·81	+0·97	+0·94	− 5·03	− 2·37	+ 2·45	+ 0·80	−0·73	−1·29	−0·45	− 4·21
	Mahabaleshvar	+0·13	+0·12	+0·45	+1·97	−0·34	−13·25	+ 7·65	+25·27	−21·68	−2·09	−0·29	−0·34	− 2·40
	Sholapur	+0·55	+0·03	−0·04	+1·09	+0·16	+ 3·38	+ 1·08	− 1·67	− 4·78	−3·05	−0·91	−0·33	− 4·49
	Kolhapur	+1·37	−0·08	+0·24	+1·31	+3·43	− 3·90	− 3·41	+ 4·02	+ 0·30	−0·09	−0·91	−0·18	+ 2·10
	Belgaum	−0·05	0	+0·01	+4·70	+0·49	+ 0·90	− 2·61	+ 0·75	+ 4·57	+0·73	−0·96	−0·24	+ 8·29
	Gokok	−0·05	+0·04	−0·13	+5·64	+0·60	− 0·88	− 1·35	− 1·22	+ 1·40	−3·08	−0·99	−0·64	− 0·66
	Dharwar	−0·10	−0·02	+0·22	+2·58	+1·10	+ 1·17	− 1·71	− 0·91	+ 1·43	−1·22	−1·60	+0·17	+ 1·11
	Hubli	−0·07	+0·08	+0·14	+1·67	+4·27	+ 0·29	− 1·71	− 1·22	+ 3·03	+1·17	−0·97	−0·22	+ 6·46
	Nargund	−0·10	+1·82	+0·10	+3·59	+1·52	− 0·83	− 1·73	− 2·64	+ 5·57	−4·53	−0·19	−0·29	+ 2·69
	Mundargi	−0·22	+0·50	−0·14	−0·38	−0·32	− 1·45	− 0·56	− 1·72	+ 0·06	+0·11	−1·35	−0·10	− 5·57
	Kalghatgi	−0·09	0	−0·24	+0·78	+1·73	− 0·16	− 1·12	+ 1·46	+ 2·68	−1·17	−0·90	+0·04	+ 3·01
	Bijapur	−0·02	+0·14	−0·12	+1·12	−0·19	+ 3·65	− 1·51	− 2·93	− 1·26	−2·22	−0·42	−0·63	− 4·39
	Honavar	−0·18	0	−0·11	+0·04	−2·09	− 3·30	− 6·16	− 4·43	−12·41	−5·24	+1·33	−0·13	−32·68
	Karwar	−0·13	0	−0·04	+0·73	−2·00	+36·33	− 6·89	+ 2·92	− 9·82	−3·69	−1·44	−0·12	+15·85
	Goa	−0·18	0	−0·02	+4·99	+0·35	+27·96	−10·05	− 7·65	− 5·30	−4·17	−0·87	−0·06	+ 5·00
	Vengurla	−0·21	0	−0·06	+0·73	−0·67	+16·38	− 6·08	− 4·52	− 6·24	−4·37	−0·94	−0·17	− 6·15
	Ratnagiri	−0·68	+0·01	+0·04	+0·78	+0·47	− 2·53	− 6·87	− 3·78	−10·16	−3·11	+0·42	−0·07	−25·48
	Colaba (Obsy.)	+0·61	−0·02	−0·01	+0·01	−0·58	+ 4·12	+ 8·41	− 0·75	− 8·95	−1·42	−0·50	−0·05	+ 0·87

TABLE XXV.—*Comparison of the monthly and total rainfall (in inches) in 1901, with the averages of past years*—contd.

PROVINCE.	STATION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
		Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inch.	Inches.
BOMBAY—*concld.*	Byculla (J. J. Hospital).	+0·38	−0·01	−0·01	+0·20	−0·43	+4·67	+ 5·79	+ 0·45	— 9·79	−2·22	−0·21	−0·04	− 1·22
	Thana . .	+0·34	−0·05	−0·06	+0·01	−0 03	−0·86	+ 6·40	+ 5·75	— 8·13	−2·46	−0·25	−0·05	+ 0·61
	Matheran .	+0·47	−0·01	−0·01	+0·59	+0·07	−8·48	+ 5·56	+22·81	−21·31	−2·24	−1·00	−0·05	− 3·60
	Surat . .	+0·34	−0·02	+0·01	+1·25	−0·08	−9·47	− 3·99	− 5·34	— 6·34	−1·29	−0·17	−0·03	−25·13
	Broach . .	−0·02	−0·02	+0·02	−0·01	−0·13	−7·76	+ 0·85	− 3·91	— 6·37	−1·25	−0·18	−0·04	−18·82
	Kaira . .	−0·03	−0·15	+0·01	−0·04	−0·33	−4·53	− 6·63	+ 0·03	— 4·84	−0·32	−0·25	−0·05	−17·23
	Bariya . .	−0·05	−0·23	+0·12	0	−0 26	−5·64	−10·43	+ 0·48	— 8·71	−0·64	−0·19	−0·11	−25·66
	Godhra . .	+0·05	−0·13	+0·04	−0·01	−0·42	−2·08	− 7·53	+ 0·10	— 6·44	−0·98	−0·16	−0·09	−17·68
	Dohad . .	+0·09	−0·17	+0·01	−0·03	−0·50	−1·15	− 5·28	+ 0·83	— 6·78	−1·02	−0·19	−0·14	−14·33
	Ahmedabad .	0	−0·08	−0·01	−0·02	−0·01	−2·71	— 2·98	− 0·45	− 4·12	−0·54	−0·21	−0·03	−11·16
	Idar . .	−0·05	−0·14	−0 03	−0·02	+0·44	−1·62	− 4·76	− 5·80	− 5·96	+0·21	−0·25	−0·07	−18·05
	Deesa . .	−0·05	−0·15	−0·06	−0·04	+0·52	−2·40	− 7·49	− 3·44	— 3·55	−0·31	−0·15	+0·03	−17·09
	Wadhwan .	−0·05	−0·06	−0·04	−0·01	−0·09	−2·90	− 4·00	− 0·51	− 3·17	−0·49	−0·53	−0·03	−11·88
	Palanpur .	+0·10	−0·20	−0·06	−0 01	−0·19	+1·23	— 8·85	− 6·65	− 5·01	−0·41	−0·11	−0·04	−20·20
	Rajkot . .	−0·05	−0·10	−0·01	−0·01	+0·02	−3·83	− 6·53	− 1·54	− 1·42	−0·61	−0·37	−0·05	−14·50
	Songad . .	−0·04	−0·08	−0·06	−0·04	−0·22	−3·60	— 4·17	+ 0·94	− 2·63	−1·15	−0·25	−0·03	−11·33
	Jetalsar . .	+0·05	−0·12	0	0	+0·02	−7·51	− 9·80	− 1·74	− 2·13	−0·84	−0·94	−0·01	−23·02
HYDERABAD.	Aurangabad (Cantt.).	+0·99	−0·11	+1·03	−0·11	−0·64	+0·86	− 3·41	+ 4·70	− 4·21	+1·62	−1·15	−0·70	− 1·13
	Hingoli . .	+1·83	−0·20	+0·20	+1·83	−0·02	−1·52	+ 1·05	+ 5·08	− 4·45	−0·02	+1·55	−0·43	+ 4·90
	Parbhani . .	+0·04	−0·06	−0·26	+0·13	+0·13	+0·29	+ 1·38	+ 0·33	− 3·98	−0·17	−0·74	−0·27	− 3·18
	Nandair (Nanded)	+0·19	+0·09	+1·84	+1·17	+0·17	−2·51	+ 1·16	+ 1·85	− 6·16	+0·46	−0·81	−0·63	− 3·18
	Bheer (Bid.) .	+0·84	−0·02	+0·56	+0·79	−0·10	+3·29	+ 0·13	+ 4·05	− 6·02	−0·31	−1·15	−0·65	+ 1·41
	Mominabad .	+1·27	+0·21	−0·12	+0·84	−0·10	+5·95	− 2·50	− 3·49	− 6·57	−1·42	−1·42	−0·97	− 8·32
	Indur (Indur) .	+0·01	+3·75	−0·42	+3·90	+0·15	+0·73	+ 1·62	− 0·94	— 1·99	+0·45	−1·08	−0·39	+ 5·79
	(Yelgandal) Karimnagar.	+0·04	+5·33	−0·31	+0·47	+0·75	+0·05	− 3·05	− 2·94	− 6·41	+1·89	−1·10	−0·33	− 5·61
	(Medak) Kandi .	−0·06	+1·76	+1·54	+1·59	−0·06	+0·40	+ 2·49	− 1·91	− 2·59	+0·42	−1·14	−0·20	+ 2·24
	(Ibrahimpatan) Shumsabad.	+0·22	+4·01	−0·58	+3·30	+0·36	+0·33	− 0·70	− 1·74	− 3·33	−1·06	−1·29	−0·18	− 0·66
	Sundanully (Ibrahimpatan).	+0·19	+3·11	−0·72	+1·76	+0·26	−1·04	+ 0·65	− 4·58	− 5·50	−1·93	−1·44	−0·08	− 9·32
	(Naldurg) Dharasev.	+0·54	−0·03	+0·07	+3·31	+0·82	+3·74	+ 2·14	− 1·23	− 7·00	−2·48	−0·91	−0·41	− 1·44
	Bidar (Bidar) .	+0·07	+0·19	−0·45	+2 06	−0·51	−3·77	− 0·66	− 4·80	− 3·59	−2·68	−1·38	−0·62	−16·14
	Gulbarga (Gulbarga).	−0·05	+0·28	−0·20	+0·26	−0·08	+0·71	− 0·21	− 3·09	− 3·23	−2·36	−0·68	−0·28	− 9·63
	Bolaram . .	+0·48	+1·83	−0·28	+2·21	−0·60	−1·66	+ 0·87	− 1·17	− 3·71	−0·79	−0·11	−0·35	− 3·28
	Secunderabad .	−0·12	+2·15	−0·44	+1·97	+0·22	+3·15	+ 0·58	− 1·21	− 3·53	−0·14	−0·42	−0·23	+ 1·98
	Hyderabad (Residency).	0	+2·34	−0·35	+2·67	+1·10	−0·52	+ 2·05	− 3·44	− 6·00	+1·20	−0·09	−0·45	− 1·49
	Zanawada (Hyderabad).	−0·08	+0·41	−0·86	+2·75	+0·05	−0·06	+ 0·56	− 5·49	− 6·11	−1·28	−0·82	−0·01	−10·91
	(Nalgunda) Bhongir.	+0·56	+3·51	−0·41	+0·74	−0·43	+0·34	— 0·08	− 1·02	— 4·10	−1·87	−1·21	−0·13	− 4·10

TABLE XXV.—*Comparison of the monthly and total rainfall (in inches) in 1901, with the averages of past years*—contd.

PROVINCE.	STATION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
		Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
HYDERABAD—*concld.*	Khamam (Hanumkonda) (Warangal).	+0·33	+1·06	−0·79	+0·95	+0·31	+ 1·08	−0·63	−3·73	−7·37	+ 1·27	− 0·48	0	− 8·00
	Sirpur Tandur .	+0·06	+1·70	+0·08	+0·87	−0·26	− 2·54	−0·54	+ 1·81	−0·78	−1·50	− 1·19	−0·76	− 2·55
	Palmoor (Mahbubnagar).	+0·17	+4·23	−0·89	+ 1·87	+0·43	− 1·56	+ 1·69	−4·93	−5·10	−2·42	− 0·78	0	− 7·29
	Raichur . .	−0·03	+2·74	−0·36	+3·98	+0·82	+ 1·49	+5·24	−2·61	−2·28	−2·05	+ 0·33	−0·12	+ 7·11
	Raichur (Cantt.)	+0·04	+2·83	−0·45	+ 1·59	+0·11	+ 1·99	+8·13	−4·26	−3·64	−0·98	+ 0·73	−0·17	+ 5·92
	Rambha . .	+2·45	+0·89	−0·42	−0·61	−0·82	− 4·18	−0·02	−3·29	+3·34	−4·99	+ 10·22	−0·89	+ 1·68
	Gopalpur . .	+0·93	+1·38	−0·55	−0·56	−1·66	− 4·79	−3·08	−6·41	+5·14	−4·13	+ 9·91	−0·86	− 4·68
	Aska . .	+ 1·56	+ 1·03	−1·32	−0·85	− 1·37	− 3·61	−0·86	−1·44	−2·76	+ 1·96	+ 3·88	−0·52	− 4·30
	Vizianagram .	+0·12	+ 1·85	−0·91	−0·40	+0·54	− 2·09	−2·98	−4·56	−1·45	+4·66	+ 9·25	−1·16	+ 2·87
	Bimlipatam .	+ 1·89	+2·76	−0·18	−0·23	+0·37	− 2·50	+0·21	−3·12	+2·64	− 1·74	+ 10·17	−1·00	+ 9·27
	Rayaghadda .	−0·14	+ 1·12	−0·74	−0·19	−0·12	− 2·47	−3·21	−2·29	−1·94	−1·37	+ 4·59	−0·38	− 7·14
	Nourangapur .	+ 1·35	+ 1·44	−0·46	−0·49	−0·61	− 6·28	−7·26	−0·60	−6·71	−0·21	− 0·58	−0·08	−20·49
	Gunipore . .	+0·05	+0·95	− 1·25	−0·63	−0·33	− 3·72	−0·27	−1·47	−4·71	− 3·63	+ 1·31	−0·33	−14·03
	Jeypore . .	+0·17	+0·89	−0·42	+ 2·61	−0·49	−10·55	−7·80	−2·75	−9·50	−3·68	− 0·42	−0·05	−31·99
	Koraput . .	+0·40	+0·50	+0·35	+2·24	−0·62	− 8·79	−3·37	+ 1·35	−3·55	−1·67	+ 3·63	−0·19	− 9·72
	Malkanagiri .	−0·07	+0·11	−0·32	−0·78	+ 1·85	− 5·13	−7·36	+ 1·14	−8·74	−2·83	− 0·52	−0·05	−22·70
	Narsapatnam .	+0·04	+ 1·22	−0·36	−1·25	+2·16	+ 1·23	−2·67	−2·14	−2·44	+ 1·10	+ 4·21	−0·80	+ 0·30
	Waltair . .	+2·61	+4·60	−0·34	−0·20	+0·13	− 1·17	−2·20	−3·23	+ 1·54	−3·24	+ 6·18	−1·50	+ 3·18
	Cocanada. .	+0·93	+ 1·70	−0·26	−0·46	+0·18	− 2·68	−2·01	+3·20	+0·82	−0·85	+ 5·88	−0·79	+ 6·58
	Rajahmundry .	+0·52	+0·83	−0·29	+ 1·68	+0·23	− 0·90	−3·37	+ 3·01	−4·70	+0·26	+ 0·87	−0·17	− 2·03
MADRAS	Ellore . .	−0·17	+0·64	−0·38	−0·52	+0·45	+ 1·24	−1·19	−1·71	−5·29	+0·57	+ 0·03	−0·32	− 6·65
	Masulipatam .	−0·03	+8·77	−0·27	−0·04	−1·18	− 1·61	−0·38	+ 1·65	−5·01	−1·80	− 1·03	−0·48	− 1·41
	Guntur . .	+0·34	+5·20	−0·49	+0·25	−1·00	− 0·44	+0·95	−3·06	−3·68	−2·63	− 1·03	−0·35	− 5·94
	Vinukonda .	+0·40	+2·11	−0·51	−0·41	−1·12	− 2·18	−0·37	−0·87	−0·32	−5·19	+ 0·41	−0·43	− 8·48
	Ongole . .	+0·12	+4·32	−0·24	−0·25	−1·03	+ 0·05	+ 1·91	−1·99	−2·26	−6·82	+ 0·91	+0·11	− 5·08
	Nellore . .	−0·42	+ 1·11	−0·20	−0·11	−0·95	− 0·83	−0·40	−0·10	−0·08	−4·81	+ 4·50	+ 1·05	− 1·24
	Udayagiri .	+ 1·98	+4·24	−0·49	−0·41	+2·27	− 1·15	+0·57	−0·09	+ 1·19	−6·48	+ 8·13	+0·60	+10·36
	Tada . .	−0·57	+ 1·95	−0·14	−0·14	−1·75	− 1·32	+0·49	+ 1·91	+ 1·25	−3·90	+ 2·39	+8·08	+ 8·25
	Kurnool . .	+0·33	+3·28	−0·45	−0·60	−0·53	+ 0·70	+0·71	−3·31	−1·28	−2·71	+ 2·29	−0·10	− 1·20
	Nandyal . .	+0·35	+0·49	−0·17	−0·36	+0·41	− 0·29	−0·59	−3·13	−5·73	−3·72	− 0·53	−0·16	−13·43
	Bellary . .	−0·11	+ 1·77	−0·46	+0·01	+0·81	+ 2·14	−0·77	−1·35	−0·14	−0·85	+ 1·96	−0·22	+ 2·78
	Gooty . .	−0·04	+0·24	−0·08	−0·44	−0·25	− 1·19	−1·33	−3·46	−0·60	−2·95	− 0·69	−0·12	−10·91
	Adoni . .	+ 1·36	+3·12	−0·29	−0·41	+ 1·03	+ 0·59	−0·23	−2·05	+0·58	−2·06	+ 0·63	−0·17	+ 2·10
	Dharmavaram	−0·01	+ 1·38	−0·18	−0·47	+3·53	− 1·95	−0·53	−3·10	+ 1·46	−1·79	+ 0·24	+0·08	− 1·34
	Cuddapah .	−0·15	+2·37	−0·19	−0·28	−0·39	− 0·79	+0·42	−2·49	−2·34	−3·32	+ 2·99	+0·55	− 3·62
	Madanapalle .	−0·13	+ 1·34	−0·35	−0·55	−1·47	+ 0·71	−1·43	−2·04	−0·38	−3·45	+ 0·34	+ 1·19	− 6·22

TABLE XXV.—*Comparison of the monthly and total rainfall (in inches) in 1901, with the averages of past years*—contd.

Province.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
		Inches	Inches.	Inches.	Inches.	Inches.	Inches.	Inches	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
	Chittoor .	—0·29	+ 1·05	—0·34	—0·21	—1·23	—1·74	—0·76	—3·48	— 1·21	—3·84	+ 2·42	+ 5·26	— 4·37
	Vellore . .	0	+ 1·23	—0·18	+ 0·10	+ 0·04	—0·36	— 1·09	—2·98	+ 1·31	+ 0·26	+ 1·36	+ 8·13	+ 7·82
	Chandragiri .	—0·20	+ 1·30	—0·24	+ 0·15	—1·12	—1·32	— 0·83	—0·50	— 0·84	—4·29	+ 0·04	+ 2·88	— 4·97
	Arcot . .	+ 0·08	+ 1·57	—0·33	—0·51	+ 0·07	—0·29	— 1·31	—4·72	— 0·15	—2·92	+ 2·89	+ 11·72	+ 6·10
	Madras . .	—0·14	+ 2·03	—0·36	—0·61	—1·97	—1·69	+ 2·80	+ 2·63	— 0·74	—1·97	+ 1·37	+ 9·35	+ 10·70
	Palmaner .	+ 1·00	+ 1·31	—0·40	—0·43	—1·49	—0·51	— 2·01	—3·58	+ 1·78	—1·28	+ 0·05	+ 2·56	— 3·00
	Saidapet . .	—0·34	+ 3·69	—0·32	—0·23	—0·66	—2·03	+ 2·26	+ 6·26	— 0·81	—2·56	+ 1·99	+ 7·83	+ 15·08
	Chingleput .	+ 2·23	+ 3·52	—0·13	—0·20	—1·16	—2·74	+ 1·26	+ 1·45	+ 2·50	—4·04	+ 3·19	+ 9·28	+ 15·16
	Conjeeveram .	—0·05	+ 4·60	—0·12	—0·56	+ 3·34	+ 0·78	— 0·70	+ 2·23	— 0·45	—2·19	+ 5·01	+ 9·30	+ 21·19
	Tindivanam .	+ 1·35	+ 1·03	—0·27	—0·60	+ 0·13	—0·19	+ 2·25	—1·95	+ 0·27	—4·93	+ 5·07	+ 0·52	+ 2·68
	Cuddalore .	+ 1·64	+ 7·91	—0·21	—0·79	—1·46	—0·39	— 1·61	—1·24	+ 1·58	—6·04	+ 4·57	— 2·27	+ 1·69
	Vriddhachalam	0	+ 4·27	—0·07	—0·34	+ 1·20	+ 2·93	— 1·35	+ 0·78	+ 1·50	+ 5·17	—1·13	— 1·94	+ 11·03
	Udayarpalaiyam	+ 0·37	+ 0·72	+ 0·13	—0·85	—0·49	—0·90	+ 0·35	—0·11	+ 6·72	—5·95	+ 3·07	— 3·01	+ 0·05
	Salem . .	—0·26	+ 0·22	—0·87	—0·08	+ 0·13	—0·90	— 0·87	+ 3·69	+ 1·21	—2·65	+ 3·24	— 0·20	+ 2·66
	Atur . .	+ 1·33	+ 0·89	—0·77	—1·09	—0·59	—1·17	— 0·93	+ 1·94	+ 5·09	—1·92	+ 1·48	— 0·49	+ 3·77
	Shevaroy Hills .	+ 0·89	+ 0·76	—0·52	—0·98	+ 0·32	—1·75	+ 1·20	—1·49	+ 3·91	—5·52	+ 3·78	— 0·08	+ 0·52
	Kumbakonam .	+ 0·06	+ 1·79	—0·01	—0·22	+ 1·62	—1·42	— 1·52	—0·97	+ 11·83	—7·54	+ 1·43	— 1·05	+ 4·00
	Tirupatur .	0	—0·33	+ 0·04	+ 1·75	—3·47	+ 0·43	+ 0·15	—2·54	+ 1·75	—0·32	—0·36	+ 0·51	— 2·39
	Hosur . .	—0·14	+ 0·71	—0·47	—0·75	+ 4·70	—0·51	— 0·58	—4·18	+ 3·11	+ 1·73	+ 0·57	+ 1·14	+ 5·33
	Tranqueber .	—0·74	+ 0·56	+ 0·05	—0·64	—0·32	—1·29	— 1·46	—2·37	+ 1·96	—8·10	+ 3·31	— 5·16	—14·20
	Negapatam .	+ 0·01	+ 1·34	—0·05	—0·31	+ 1·33	—1·31	— 1·41	—1·79	+ 0·04	—5·50	+ 2·67	— 3·76	— 8·74
	Tanjore . .	—0·56	+ 0·19	+ 1·30	+ 0·17	—0·34	+ 0·55	— 1·57	—0·91	+ 6·30	—4·37	—0·23	0	+ 0·53
	Patukota . .	—0·14	+ 0·53	0	+ 1·76	—1·85	—1·07	— 1·27	—3·55	+ 3·11	—2·07	—1·22	+ 0·33	— 5·44
	Trichinopoly .	—0·82	—0·33	—0·47	—1·41	—0·75	+ 0·49	— 1·75	—2·76	+ 5·03	—2·37	+ 0·45	+ 0·85	— 3·84
	Karur . .	—0·22	—0·10	—0·33	—1·00	+ 0·66	—1·54	— 1·15	—0·39	+ 5·29	—0·69	+ 3·92	— 0·37	+ 4·08
	Coimbatore .	+ 0·21	+ 0·38	—0·24	+ 1·26	—1·12	—0·12	— 0·31	—0·77	+ 4·30	—3·28	+ 3·69	+ 0·51	+ 4·51
	Kollegal . .	+ 0·21	+ 1·78	—0·93	+ 0·19	—0·88	—1·27	+ 0·02	—3·66	+ 7·21	+ 1·48	+ 1·43	+ 0·57	+ 6·15
	Dindigul . .	—0·16	—0·01	+ 0·48	+ 0·33	+ 1·26	—1·55	— 0·27	—1·11	+ 5·32	—0·14	+ 5·89	— 1·16	+ 8·58
	Madura (Obsy.)	+ 0·14	+ 0·36	+ 0·55	+ 1·15	+ 3·41	—1·01	— 0·91	—2·27	+ 6·13	—5·68	+ 2·69	— 1·56	+ 3·00
	Vattanum .	—0·27	+ 3·55	+ 0·33	+ 1·13	—0·08	+ 0·41	+ 0·27	—1·77	+ 3·01	—5·92	—2·50	— 3·57	— 5·41
	Periyakulam .	+ 5·35	+ 1·32	+ 0·23	+ 0·96	—1·00	+ 0·34	— 0·43	—0·50	+ 2·39	—2·69	+ 3·28	— 0·18	+ 9·07
	Tinnevelly .	+ 1·88	—0·42	+ 3·62	+ 0·34	—1·25	+ 0·86	— 0·29	—0·16	+ 0·76	—6·03	—0·21	— 2·91	— 3·81
	Tuticorin .	+ 1·63	—0·23	+ 1·37	—1·04	—0·06	+ 0·41	— 0·18	—0·33	+ 0·08	—2·28	+ 2·35	— 1·87	— 0·15
	Satur . .	+ 3·10	—0·49	+ 2·66	+ 1·81	+ 1·22	—0·46	— 1·01	—0·67	+ 2·56	—2·36	+ 2·95	— 1·99	+ 7·32
	Cochin . .	—0·06	—0·06	+ 1·68	—0·35	—3·44	+ 1·18	— 4·55	—3·04	— 1·41	—7·09	+ 7·90	— 0·89	—10·13
	Palghat . .	+ 0·91	+ 0·47	—0·11	—0·62	—2·53	—4·63	+ 10·23	+ 3·37	— 0·61	+ 0·38	+ 4·20	— 0·28	+ 10·78
	Wellington .	+ 6·04	+ 2·69	+ 0·21	+ 0·46	+ 2·65	+ 0·31	+ 0·36	—0·81	+ 6·84	—4·48	—0·54	— 1·08	+ 11·75

MADRAS—*contd.*

TABLE XXV.—*Comparison of the monthly and total rainfall (in inches) in 1901, with the averages of past years*—contd.

Provinces.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
		Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
Madras—*concld.*	Manantoddy .	+0·33	+1·25	+0·37	+1·61	−0·26	+0·35	+15·28	− 0·33	+ 1·11	+ 5·28	+ 7·31	+0·81	+34·11
	Calicut . .	+1·10	+0·95	+1·17	+1·79	−4·37	−3·39	+ 2·01	− 0·93	+ 0·69	− 2·14	+ 5·81	+1·69	+ 4·38
	Tellicherry .	−0·29	−0·10	+1·35	+0·25	−4·75	+1·10	−10·11	− 0·25	+ 0·02	− 0·41	+ 5·86	+1·90	− 5·43
	Cannanore .	−0·36	−0·22	+0·90	+4·23	−2·98	+3·04	− 0·91	− 0·15	+ 1·50	+ 4·87	+10·52	+1·80	+22 24
	Mangalore .	−0·05	+0·08	+0·05	+1·67	−4·07	+1·18	− 7·82	− 4·86	− 6·75	− 4·28	+ 7·77	+0·82	−16·26
Mysore and Coorg.	Bangalore .	−0·19	+2·98	−0·56	−0·37	+1·03	−1·41	− 1·20	— 2·98	+ 6·40	− 1·56	− 0·68	+0·28	+ 1·74
	Mysore . .	+0·07	+0·70	−0·68	−1·56	−1·94	−0·68	− 1·49	− 0·90	+ 4·54	+ 5·72	− 0·74	−0·09	+ 2·95
	Shimoga . .	−0·05	+0·31	−0·15	−0·41	−0·73	−1·33	+ 2·92	+ 2·11	+ 2·35	+ 1·25	− 0·14	−0·19	+ 5·94
	Mercara . .	−0·21	+1·34	−0·73	−0·93	−3·49	−2·19	+11·63	− 3·46	− 5·65	+ 3·48	+ 2·08	+0·15	+ 2·02
	Kolar . .	−0·18	+2·12	−0·57	−0·79	+2·15	−1·79	− 2·90	− 3·56	+ 1·03	− 3·03	− 0·22	+1·27	− 6·47
	Tumkur . .	−0·16	+2·20	−0·36	−0·67	−0·26	−2·02	− 0·71	− 3·60	+ 4·50	+ 2·09	+ 0·99	+0·51	+ 2·51
	Chitaldroog .	+0·08	+0·25	−0·29	−1·10	+0·64	−0·82	− 0·79	− 0·33	+ 0·92	− 0·77	− 1·46	−0·14	− 3·81
	Chikmagalur .	+0·04	+2·32	−0·46	−1·04	− 2·38	+1·06	− 0·86	− 2·30	+ 0·04	+ 0·32	+ 2·35	+1·40	+ 0·48
	Hassan . .	−0·42	+1·29	−0·35	−1·01	−0·83	−2·73	+ 0·46	— 1·24	+ 0·29	+ 0·67	+ 5·16	+0·07	+ 1·36
Ceylon.	Trincomalee .	−3·80	+0·25	+6·34	+0·45	−0·30	−0·42	− 1·57	− 2·76	+ 6·82	− 5·25	+ 0·28	−5·92	− 5·88
	Colombo . .	+8·69	+1·62	+0·34	−2·60	−5·81	−2·44	+ 0·14	— 3·21	— 1·08	−10·61	+ 7·18	−2·99	− 1·77
	Ratnapura .	+5·56	+2·90	−3·61	+3·61	−6·16	+3·63	+ 2·93	− 5·52	+ 0·11	− 8·35	+ 3·97	+2·29	+ 1·36
	Puttalam . .	+4·21	+1·51	−1·07	+3·80	−0·59	−0·40	+ 0·43	− 0·86	+ 0·87	− 3·95	+ 2·80	−4·09	+ 2·66
	Anuradhapur .	−2·15	+2·38	−0·19	−2·16	−1·82	−1·37	— 1·05	— 1·90	+ 2·43	− 1·56	+ 0·46	−2·13	− 9·06
	Mannar . .	−0·15	+2·07	+0·49	+1·76	−0·72	−0·58	— 0·23	— 0·50	− 0·83	− 6·04	− 0·52	−4·06	− 9·31
	Jaffna . .	+2·75	−0·70	+0·02	−0·92	+0·95	−0·74	+ 0·76	− 1·55	+ 0·07	− 0·33	− 1·14	−2·34	− 3·17
	Batticoloa .	−1·51	+0·33	+6·93	+0·62	+1·38	−0·99	− 0·28	− 2·41	+ 3·18	− 1·92	− 4·23	−0·30	+ 0·80
	Hambantota .	+6·23	−0·70	− 1·51	+1·40	−2·91	−1·85	− 0·02	− 1·32	− 1·82	− 1·51	− 3·11	−2·99	−10·11
	Galle . .	+8·33	+9·13	+2·55	+1·82	+3·18	+2·10	+ 1·55	− 2·21	− 2·92	− 7·17	+ 1·99	−3·54	+14·81
	Kandy . .	+0·62	−0·72	−2·10	+5·00	−3·28	+5·10	+ 0·20	− 1·27	− 2·31	− 4·56	+ 3·58	−4·65	− 4·39
	Nuwara Eliya .	−1·65	+0·19	−0·60	+3·01	−4·77	+8·13	− 3·92	− 3·55	— 2·17	− 3·88	+ 4·83	−5·49	− 9·87
	Hakgala . .	−4·92	−0·16	+1·46	−3·39	−2·79	+7·71	− 2·59	− 3·00	− 0·76	+ 1·65	+ 3·68	−6·07	− 9·18
	Badulla . .	−4·81	−0·85	−1·85	−0·65	−3·20	−0·80	— 0·57	− 2·34	+ 3·42	− 6·34	− 1·03	−7·37	−26·39
Burma.	Akyab . .	+0·23	+0·19	−0·46	−1·60	+0·19	−2·78	+ 5·23	+ 3·64	+ 1·44	+ 4·39	+ 0·70	−0·05	+11·12
	Kyaukpyu .	−0·07	+0·51	−0·25	−1·00	−0·52	−3·51	− 6·85	− 7·88	+ 4·89	+ 4·83	+ 2·08	−0·54	− 8·31
	Sandoway .	−0·03	+2·67	−0·11	−1·17	−2·03	+9·92	−12·73	+28·76	−14·19	+ 0·93	+ 0·11	−0·31	+11·82
	Rangoon . .	−0·12	+1·72	−0·06	−1·30	+4·18	−1·58	+ 4·94	− 5·84	− 2·55	+ 3·61	− 2·76	−0·07	+ 0·17
	Bassein . .	−0·18	+4·94	−0·05	−1·49	−0·28	−2·76	− 6·63	+ 1·40	− 6·99	+ 5·37	— 1·98	+0·10	− 8·55
	Diamond Island	−0·22	+4·26	−0·01	−1·61	−0·12	−6·86	+ 3·87	+ 5·92	− 7·30	+ 3·99	— 2·32	−0·82	− 1·22
	Henzada . .	−0·07	+1·32	−0·04	−0·88	− 2·23	+2·13	+ 0·80	+ 3·55	− 0·15	+ 4·90	+ 0·62	−0·03	+ 9·92

TABLE XXV.—*Comparison of the monthly and total rainfall (in inches) in 1901, with the averages of past years*—contd.

PROVINCE.	STATION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
		Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
BURMA—*concld.*	Myanaung	−0·06	+1·52	−0·01	−1·02	−0·80	−0·16	−0·50	+2·32	−0·60	+3·21	−0·61	−0·12	+3·26
	Prome	+0·03	+2·78	−0·02	−0·81	−1·39	+1·19	−2·36	+0·97	−3·51	+4·77	−0·27	−0·08	+1·30
	Thayetmyo	0	+2·34	−0·07	−0·79	+5·65	−0·64	−2·19	−4·26	−2·68	+1·32	−1·80	−0·10	−3·22
	Mandalay	−0·01	+0·39	−0·14	−0·69	+1·11	+3·21	−1·21	−2·44	−1·57	−0·03	−1·02	−0·28	−2·68
	Shwebo	−0·09	+0·09	−0·28	−0·51	−0·23	−0·06	−2·43	−2·64	−2·72	−0·01	−0·07	−0·19	−9·14
	Ye-u	−0·10	+0·12	−0·48	−0·89	+0·47	−3·46	−3·04	−2·56	−3·51	−1·00	+0·05	−0·28	−14·78
	Minbu	−0·05	+0·74	0	−0·69	+3·59	−2·07	+3·14	−0·22	+0·63	+2·58	−0·99	+0·02	+6·58
	Pyinmana	−0·06	+1·81	−0·02	−0·94	+3·05	+3·57	−2·94	−1·27	+3·28	+2·59	+0·92	−0·11	+9·88
	Pagan	−0·04	+0·40	−0·16	−0·52	+0·33	−1·62	+0·53	+1·90	−2·88	+0·64	−0·41	−0·13	−1·96
	Kyauksai	−0·21	+1·47	−0·02	−0·86	+0·80	+0·82	−0·87	+1·12	−2·65	+2·99	−0·60	−0·31	+1·68
	Bhamo	−0·74	+0·29	−0·69	−0·40	+1·66	−4·28	−6·23	−6·04	+0·03	+0·66	+0·91	−0·36	−15·19
	Kindat	+0·06	−0·17	−1·08	+1·55	+8·60	−2·68	−3·25	+2·74	+6·09	+1·25	−0·83	−0·49	+11·79
	Magwe	0	+0·67	0	−1·07	+3·95	−0·23	+0·52	−0·38	+3·63	+4·02	−0·83	−0·20	+10·08
	Yemethin	−0·02	+1·22	−0·11	−1·50	+4·61	+1·89	−0·19	−1·22	+2·98	+4·02	−0·54	−0·33	+10·81
	Fort Sagaing	+0·04	+0·29	−0·18	−0·90	−0·77	+0·92	−4·08	−2·41	+0·43	−0·22	−1·49	−0·22	−8·59
	Mingin	−0·14	+0·22	−0·55	−1·23	+7·24	+3·41	−3·59	−2·78	−3·80	+4·18	−0·47	−0·23	+2·26
	Toungoo	−0·07	+2·64	−0·04	−1·94	+5·50	−0·47	−1·14	−1·32	−2·06	+1·58	+0·84	−0·16	+3·36
	Shwegyin	−0·12	+2·57	−0·06	−2·51	−1·50	−11·13	−7·32	+11·49	+4·23	+0·80	−0·38	−0·08	−4·01
	Moulmein	−0·18	+0·14	−0·19	−1·86	−5·20	−4·52	−6·87	+20·51	−10·86	+2·61	+0·20	−0·02	−6·24
	Tavoy	−0·16	+1·07	+3·24	−2·97	−6·41	+0·94	+5·19	+3·21	−19·60	+7·78	−1·49	−0·11	−9·31
	Mergui	+1·88	+1·17	+0·62	−2·48	+1·31	+4·79	+10·96	+20·28	−17·23	+8·00	−1·91	−0·46	+26·93
	Myingyan	−0·06	+0·42	+0·03	−0·35	−0·46	+3·18	−1·18	−1·40	−0·14	−0·37	+0·33	−0·16	−0·16
	Monywa	0	+0·39	−0·37	−1·18	−0·98	−2·32	−1·62	+1·61	−1·84	−1·16	−0·51	−0·22	−8·20
BAY ISLANDS.	Port Blair	+1·11	+2·35	+0·78	−2·77	+4·57	+1·80	−0·80	+3·84	−6·03	+3·34	+13·33	−4·24	+17·28
	Cocos Island	−0·33	+1·34	+0·19	−1·02	−0·57	+16·83	+4·80	+3·56	−9·94	+4·63	−2·15	−0·94	+16·40
KASHMIR.	Leh	+0·64	−0·14	−0·19	0	+0·06	−0·11	+0·60	−0·32	−0·19	−0·23	−0·10	−0·08	−0·06
	Srinagar	−0·08	+0·11	+0·26	+3·21	+1·34	−2·50	−5·41	−5·99	−1·04	+0·16	−0·25	−0·71	−10·90
	Skardu	−1·59	−1·19	−1·23	−3·38	−0·16	+0·92	+0·20	−1·09	+0·09	+0·05	−0·13	−0·63	−8·14
	Gilgit	+0·11	−0·03	−0·14	+0·90	+0·46	+0·65	−0·94	+0·17	+0·03	+1·36	−0·07	−0·01	+2·49
NEPAL	Katmandu	+1·52	−0·56	+0·46	−1·29	−0·68	−3·98	−0·09	−2·15	−0·28	−2·28	−0·12	−0·25	−9·70
EXTRA INDIA.	Meshed	−0·22	−0·90	−1·89	−1·03	+1·08	+1·84	−0·03	−0·62	0	+0·10	+0·56	−0·42	−0·93
	Teheran	−0·75	−1·62	−2·71	+0·18	+0·05	+1·84	−0·44	+0·05	+0·17	+0·24	+0·74	−0·96	−2·61
	Ispahan	−0·11	−0·04	+0·15	−0·68	+0·65	+0·01	−0·10	0	+0·17	−0·05	−0·85	−0·01	−0·86
	Bushire	−2·01	−1·23	−0·34	−0·07	−0·03	0	0	0	0	−0·20	−2·60	−1·75	−8·23
	Jask	−0·40	−1·09	−1·21	−0·04	0	−0·13	−0·02	0	0	−0·04	−0·44	−0·78	−4·15
	Muscat	−2·36	−0·66	+0·01	−0·05	0	0	−0·08	0	0	−0·04	−0·94	+0·26	−3·86

TABLE XXV.—*Comparison of the monthly and total rainfall (in inches) in 1901, with the averages of past years*—concld.

Province.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
		Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
Extra India—*concld.*	Baghdad	− 1·06	− 2·49	− 1·65	− 0·97	− 0·09	− 0·01	0	− 0·13	+ 0·02	− 0·04	− 0·98	− 1·44	− 8·84
	Aden	0	− 0·28	− 1·13	− 0·53	− 0·21	+ 1·33	0	− 0·20	− 0·21	− 0·02	− 0·21	− 0·02	− 1·48
	Perim	− 0·48	+ 0·35	+ 0·11	+ 0·28	− 0·15	+ 0·59	− 0·02	0	0	− 0·09	− 0·06	+ 1·23	+ 1·76
	Kabul	?	− 0·72	− 3·71	+ 1·17	+ 2·01	− 0·30	− 0·39	− 0·17	0	0	− 0·91	− 0·18	?
	Kashgar	− 0·31	− 0·01	− 0·25	?	+ 1·64	− 0·07	− 0·45	+ 0·15	− 0·13	− 0·07	− 0·04	− 0·19	?
	Zanzibar	− 0·74	+ 7·76	− 0·48	+ 6·26	+ 8·63	+ 0·82	− 0·49	− 0·63	+ 1·30	− 1·56	− 1·36	− 1·04	+ 18·47
	Port Victoria (Seychelles)	− 6·43	+ 0·88	+ 1·31	+ 5·59	+ 0·35	− 2·22	+ 1·68	− 1·87	+ 7·92	+ 0·20	− 0·10	− 4·86	+ 2·45
	Mauritius	+ 11·26	− 2·99	+ 1·34	− 1·86	− 2·19	− 0·04	− 0·35	− 0·03	− 0·41	− 0·78	+ 3·15	+ 1·35	+ 8·55

TABLE XXVI.—*Geographical summary of rainfall anomalies in 1901.*

Meteorological Division.	Area, square miles.	Number of stations.	Normal rainfall.	Actual rainfall.	Mean excess or defect.	Total excess square miles × 1 inch.	Total defect square miles × 1 inch.
			Inches.	Inches.	Inches.		
I. Punjab Plains	120,000	29	21·71	18·08	− 3·63		435,600
II. United Provinces of Agra and Oudh	83,500	44	38·07	32·40	− 5·67		473,445
IIIa. Rajputana, East	67,000	29	27·02	14·78	−12·24		820,080
IIIb. „ West	58,000	10	12·51	5·76	− 6·75		391,500
IV. Central India States	91,000	26	44·26	41·50	− 2·76		251,160
V. Bihar	30,000	15	44·75	38·77	− 5·98		179,400
VI. Western Bengal	38,000	14	52·75	47·82	− 4·93		187,340
VII. Lower „	54,000	28	65·53	65·82	+ 0·29	15,660	
VIII. Assam and Cachar	61,000	17	95·19	89·36	− 5·83		355,630
IX. Orissa and Northern Circars	27,000	32	52·75	46·23	− 6·52		176,040
X. Central Provinces, South	61,000	19	53·46	53·38	− 0·08		4,880
XI. Berar and Khandesh	43,000	13	36·41	34·47	− 1·94		83,420
XII. Gujarat	54,500	13	33·82	16·00	−17·82		971,190
XIII. Sind and Cutch	68,000	10	8·59	2·70	− 5·89		400,520
XIV. North Deccan	48,000	13	30·83	30·52	− 0·31		14,880
XV. Konkan and Ghats	16,000	11	139·95	139·09	− 0·86		13,760
XVI. Malabar and Ghats	18,000	8	114·50	119·77	+ 5·27	94,860	
XVII. Hyderabad	74,000	17	34·58	32·17	− 2·41		178,340
XVIII. Mysore and Bellary	58,000	18	29·28	28·41	− 0·87		50,460
XIX. Carnatic	72,000	36	36·94	39·13	+ 2·19	157,680	
XX. Arakan	11,000	6	152·36	150·62	− 1·74		19,140
XXI. Pegu	32,500	7	72·24	73·13	+ 0·89	28,925	
XXII. Tenasserim	10,500	4	173·30	175·15	+ 1·85	19,425	
XXIII. Upper Burma	?	13	39·02	38·30	− 0·72		

On the mean of the whole area represented in the above table there was a defect of 3·92 inches or, excluding the Burmese Peninsula, of 4·13 inches.

TABLE XXVII.—*Geographical summary of the distribution of rainfall in 1901 according to season.*

METEOROLOGICAL DIVISION.	JANUARY AND FEBRUARY.			MARCH TO MAY.			JUNE TO OCTOBER.			NOVEMBER AND DECEMBER		
	Normal average.	Actual average.	Difference.	Normal average.	Actual average.	Difference.	Normal average.	Actual average.	Difference.	Normal average.	Actual average.	Difference.
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
North-West Himalayas	6·43	9·72	+3·29	7·21	6·77	−0·44	41·54	40·59	− 0·95	1·74	0·87	−0·87
Punjab Plains	2·24	3·09	+0·85	2·75	3·41	+0·66	16·22	11·49	− 4·73	0·75	0·09	−0·66
United Provinces of Agra and Oudh.	1·18	3·73	+2·25	1·41	0·85	−0·56	35·69	29·00	− 6·69	0·45	0·23	−0·22
Rajputana	0·55	1·03	+0·48	0·76	0·28	−0·48	21·59	11·13	−10·46	0·39	0·03	−0·36
Central India States	0·97	2·38	+1·41	0·80	0·72	−0·08	41·76	38·39	− 3·37	0·73	0·02	−0·71
Bihar	1·19	3·37	+2·18	2·51	3·08	+0·57	40·34	31·89	− 8·45	0·34	0·28	−0·06
Western Bengal and Chota Nagpur.	1·38	6·24	+4·86	3·59	2·63	−0·96	47·13	39·30	− 7·83	0·65	0·37	−0·28
Lower Bengal	1·41	2·20	+0·79	10·64	8·88	−1·76	52·25	50·90	− 1·35	0·79	2·90	+2·11
Eastern Himalayas	1·65	1·90	+0·25	18·38	12·27	−6·11	104·53	85·82	−18·71	0·50	0·84	+0·34
Assam and Eastern Bengal	1·83	1·28	−0·55	22·77	12·98	−9·79	69·30	70·85	+ 1·55	1·27	4·23	+2·96
Orissa and Northern Circars	0·74	3·90	+3·16	4·75	4·72	−0·03	44·68	32·45	−12·23	2·42	5·26	+2·84
Central Provinces South	0·86	4·62	+3·76	1·84	2·63	+0·79	49·58	46·10	− 3·48	0·90	0·03	−0·87
Berar and Khandesh	0·53	1·84	+1·31	1·13	1·61	+0·48	33·56	30·82	− 2·74	1·19	0·20	−0·99
Gujarat	0·18	0·08	−0·10	0·37	0·34	−0·03	32·72	15·60	−17·12	0·35	0·01	−0·34
Sind and Cutch	0·53	0·26	−0·27	0·46	0·51	+0·05	8·22	2·09	− 6·13	0·22	0·04	−0·18
North Deccan	0·19	0·51	+0·32	3·36	6·44	+3·08	25·71	23·25	− 2·46	1·55	0·33	−1·22
Konkan and Ghâts	0·23	0·34	+0·11	1·71	2·17	+0·46	132·38	131·46	− 0·92	0·97	0·44	−0·53
Malabar and Ghâts	0·50	1·13	+0·63	11·39	9·68	−1·71	98·53	97·68	− 0·85	4·09	11·27	+7·18
Hyderabad	0·27	2·34	+2·07	1·95	3·73	+1·78	30·80	24·60	− 6·20	1·49	0·39	−1·10
Ceded Districts and Mysore	0·25	1·92	+1·67	4·82	4·11	−0·71	21·63	18·68	− 2·95	2·57	3·71	+1·14
Carnatic	0·89	3·04	+2·15	3·97	3·73	−0·24	21·05	17·89	− 3·16	10·97	14·34	+3·37
Nilgiris	2·05	10·78	+8·73	9·56	12·88	+3·32	26·85	29·07	+ 2·22	11·91	9·39	−2·52
Arakan	0·97	0·79	−0·18	16·37	8·91	−7·46	125·56	136·91	+11·35	2·95	4·01	+1·06
Pegu	0·22	2·83	+2·61	8·46	8·53	+0·07	66·57	65·73	− 0·84	2·89	1·70	−1·19
Tenasserim	1·02	2·62	+1·60	22·02	17·52	−4·50	147·95	153·77	+ 5·82	2·32	1·26	−1·06
Upper Burma	0·24	0·70	+0·46	6·12	7·37	+1·25	29·78	28·19	− 1·59	1·56	0·95	−0·61
Bay Islands	1·17	3·41	+2·24	15·03	15·63	+0·60	69·08	80·08	+11·00	11·73	14·73	+3·00

TABLE XXVIII.—*Average actual and normal rainfall data of the 57 meteorological divisions in India for the four seasons of the year 1901 and for the whole year.*

Province.	Division.	January and February.			March to May.			June to October.			November and December.			Whole year.		
		Average actual rainfall.	Average normal rainfall.	Variation of actual from normal.	Average actual rainfall.	Average normal rainfall.	Variation of actual from normal.	Average actual rainfall	Average normal rainfall	Variation of actual from normal	Average actual rainfall.	Average normal rainfall	Variation of actual from normal.	Average actual rainfall.	Average normal rainfall.	Variation of actual from normal.
		Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
Burma	1. Tenasserim	2·17			18·89			169·56			2·32			192·94		
	2. Lower Burma Deltaic	2·66			10·97			85·47			1·61			100·71		
	3. Central do.	1·85			5·38			48·08			1·23			56·54		
	4. Upper do.	0·63	0·24	+0·39	6·92	6·12	+ 0·80	34·18	29·78	+ 4·40	1·11	1·56	—0·45	42·84	37·70	+ 5·14
	5. Arakan	1·01			10·38			157·96			4·07			173·42		
Bengal and Assam	6. Eastern Bengal	0·74	1·42	—0·68	11·01	17·35	— 6·34	78·02	68·86	+ 9·16	4·44	1·61	+2·83	94·21	89·24	+ 4·97
	7. Assam Surma	0·45	2·38	—1·93	24·28	38·62	—14·34	88·47	91·18	— 2·71	3·51	1·89	+1·62	116·71	134·07	—17·36
	8. Do. Hills	1·22	1·86	—0·64	18·61	27·44	— 8·83	92·10	104·39	—12·29	4·45	1·72	+2·73	116·38	135·41	—19·03
	9. Do. Brahmaputra	1·93	2·12	—0·19	14·53	23·47	— 8·94	61·29	63·24	— 1·95	4·41	1·05	+3·36	82·16	89·88	—7·72
	10. Deltaic Bengal	2·70	1·63	+1·07	9·38	10·18	— 0·80	47·38	47·67	— 0·29	3·81	1·08	+2·73	63·27	60·56	+ 2·71
	11. Central do.	2·09	1·28	+0·81	6·34	7·71	— 1·37	40·46	46·49	— 6·03	2·13	0·65	+1·48	51·02	56·13	— 5·11
	12. North do.	1·19	1·01	+0·18	9·46	15·83	— 6·37	67·94	79·83	—11·89	1·08	0·25	+0·83	79·67	96·92	—17·25
	13. Bengal Hills	1·92	1·62	+0·30	11·26	18·39	— 7·13	84·07	111·33	—27·26	1·28	0·54	+0·74	98·53	131·88	—33·35
	14. Orissa	4·34	1·16	+3·18	5·15	6·80	— 1·65	37·52	48·88	—11·36	5·49	2 24	+3·25	52·50	59·08	— 6·58
	15. Chota Nagpur	6·41	1·42	+4·99	2·52	4·07	— 1·55	41·13	47·40	— 6·27	0·39	0·70	—0·31	50·45	53·59	— 3·14
	16. South Bihar	3·56	1·30	+2·26	2·21	2·37	— 0·16	29·24	39·70	—10·46	0·29	0·37	—0·08	35·30	43·74	— 8·44
	17. North do.	2·21	1·21	+1·00	3·66	4·36	— 0·70	31·44	47·48	—16·04	0·26	0·22	+0·04	37·57	53·27	—15·70
United Provinces of Agra and Oudh.	18. United Provinces East.	4·19	0·99	+3·20	1·00	0·91	+ 0·09	31·01	35·98	— 4·97	0	0·37	—0·37	36·20	38·25	— 2·05
	19. South Oudh	3·34	0·95	+2·39	0·45	0·99	— 0·54	28·49	33·73	— 5·24	0·07	0·43	—0·36	32·35	36·10	— 3 75
	20. North do.	3·70	1·09	+2·61	0·67	1·55	— 0·88	26·44	35·89	— 9·45	0·16	0·42	—0·26	30·97	38·95	— 7·98
	21. United Provinces Central.	2·94	0·78	+2·16	0·29	0·73	— 0·44	27·76	32·41	— 4·65	0·14	0·39	—0·25	31·13	34·31	— 3·18
	22. United Provinces West.	2·40	0·88	+1·52	0·22	1·04	— 0·82	16·53	24·06	— 7·53	0·19	0·35	—0·16	19·34	26·33	— 6·99
	23. United Provinces East Submontane.	3·59	0·98	+2·61	1·87	1·77	+ 0·10	30·09	39·69	— 9·60	0·01	0·26	—0·25	35·56	42·70	— 7·14
	24. United Provinces West Submontane.	4·83	2·51	+2·32	1·77	2·11	— 0·34	38·48	41·15	— 2·67	0·57	0 60	—0·03	45·65	46·37	— 0·72
	25. United Provinces Hills.	7·46	4·79	+2·67	3·80	5·46	— 1·66	53·00	50·06	+ 2·94	1·07	0·74	+0·33	65·33	61·05	+ 4·28
Punjab and North-West Frontier Province.	26. South-East Punjab	2·49	1·13	+1·36	0·54	1·29	— 0·75	12·80	20·76	— 7·96	0·18	0·33	—0·15	16·01	23·51	— 7·50
	27. South do.	1·82	1·08	+0·74	1·00	1·40	— 0·40	7·96	13·21	— 5·25	0·12	0·33	—0·21	10·90	16·02	— 5·12
	28. Central do.	2·34	2·00	+0·34	3·30	2·36	+ 0·94	10·00	14·00	— 4·00	0	0·51	—0·51	15·64	18·87	— 3·23
	29. Punjab Submontane	5·78	2·90	+2·88	3·00	2·70	+ 0·30	20·61	24·38	— 3·77	0·14	0·75	—0·61	29·53	30·73	— 1·20
	30. Do. and North-West Frontier Province Hills.	13·14	6·55	+6·59	7·11	8·50	— 1·39	41·46	45·89	— 4·43	0·65	1·60	—0·95	62·36	62·54	— 0·18

TABLE XXVIII.—*Average actual and normal rainfall data of the 57 meteorological divisions in India for the four seasons of the year 1901 and for the whole year*—concld.

Province.	Division.	January and February.			March to May.			June to October.			November and December.			Whole year.		
		Average actual rainfall.	Average normal rainfall.	Variation of actual from normal.	Average actual rainfall.	Average normal rainfall.	Variation of actual from normal.	Average actual rainfall	Average normal rainfall.	Variation of actual from normal.	Average actual rainfall.	Average normal rainfall.	Variation of actual from normal.	Average actual rainfall.	Average normal rainfall.	Variation of actual from normal.
		Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
Punjab and North-West Frontier Province—*concld.*	31. North Punjab	4·95	3·23	+1·72	10·36	4·95	+5·41	10·09	12·26	— 2·17	0	1·37	—1·37	25·40	21·81	+ 3·59
	32. West do.	0·99	0·98	+0·01	2·80	1·40	+1·40	3·81	6·22	— 2·41	0	0·33	—0·33	7·60	8·93	— 1·33
Bombay and Malabar Coast Districts (Madras).	33. Malabar	1·06	0·38	+0·68	9·99	11·01	—1·02	110·22	109·94	+ 0·28	12·91	4·19	+8·72	134·18	125·52	+ 8·66
	33A. Travancore	3·62			15·24			64·24			17·39			100·49		
	34. Madras South Central	1·22	0·46	+0·76	5·49	5·90	—0·41	18·92	18·15	+ 0·77	6·59	5·05	+1·54	32·22	29·56	+ 2·66
	35. Coorg	1·58			7·04			86·34			7·21			102·17		
	36. Mysore	1·41	0·18	+1·23	5·63	5·18	+0·45	27·36	25·94	+ 1·42	3·43	3·17	+0·26	37·83	34·47	+ 3·36
	37. Konkan	0·25	0·14	+0·11	2·10	2·08	+0·02	102·55	111·62	— 9·07	0·46	1·24	—0·78	105·36	115·08	— 9·72
	38. Bombay Deccan	0·76	0·10	+0·66	5·24	2·78	+2·46	27·38	31·86	— 4·48	0·41	1·85	—1·44	33·79	36·59	— 2·80
	39. Hyderabad North	1·66	0·17	+1·49	3·48	1·42	+2·06	30·10	33·38	— 3·28	0·02	1·89	—1·87	35·26	36·86	— 1·60
	40. Khandesh	0·87	0·13	+0·74	1·19	1·23	—0·04	23·83	29·93	— 6·10	0·01	1·48	—1·47	25·90	32·77	— 6·87
Central Provinces and Berar.	41. Berar	2·27	0·65	+1·62	1·34	1·25	+0·09	32·41	37·48	— 5·07	0	1·18	—1·18	36·02	40·56	— 4·54
	42. Central Provinces West.	2·53	0·77	+1·76	1·66	0·95	+0·71	37·58	42·05	— 4·47	0	0·90	—0·90	41·77	44·67	— 2·90
	43. Central Provinces Central.	3·33	0·77	+2·56	2·27	1·26	+1·01	49·82	48·90	+ 0·92	0	0·70	—0·70	55·42	51·63	+ 3·79
	44. Central Provinces East.	5·85	0·82	+5·03	2·04	1·94	+0·10	42·93	46·55	— 3·62	0·08	0·77	—0·69	50·90	50·08	+ 0·82
Bombay (North)	45. Gujarat	0·12	0·08	+0·04	0·33	0·32	+0·01	25·26	43·39	—18·13	0	0·24	—0·24	25·71	44·03	—18·32
	46. Kathiawar and Cutch	0·07	0·14	—0·07	0·24	0·37	—0·13	12·30	27·32	—15·02	0·01	0·36	—0·35	12·62	28·19	—15·57
	47. Sind	0·35	0·71	—0·36	0·51	0·60	—0·09	1·33	4·51	— 3·18	0·04	0·18	—0·14	2·23	6·00	— 3·77
	48. Baluchistan Hills	1·89	3·84	—1·95	2·67	1·68	+0·99	1·34	2·43	— 1·09	0	1·62	—1·62	5·90	9·57	— 3·67
Rajputana and Central India.	49. Central India East	1·75	0·96	+0·79	0·39	0·75	—0·36	31·57	40·08	— 8·51	0·09	0·72	—0·63	33·80	42·51	— 8·71
	50. Rajputana East and Central India West.	1·42	0·69	+0·73	0·29	0·81	—0·52	15·77	26·21	—10·44	0·03	0·49	—0·46	17·51	28·20	—10·69
	51. West Rajputana	0·34	0·43	—0·09	0·18	0·72	—0·54	6·02	11·18	— 5·16	0·03	0·25	—0·22	6·57	12·58	— 6·01
Madras	52. East Coast North	3·55	0·50	+3·05	3·86	3·61	+0·25	26·61	34·59	— 7·98	6·19	3·31	+2·88	40·21	42·01	— 1·80
	53. Hyderabad South	2·59	0·24	+2·35	4·27	2·24	+2·03	20·13	25·92	— 5·79	0·71	1·56	—0·85	27·70	29·96	— 2·26
	54. Madras Central	2·18	0·12	+2·06	3·13	2·46	+0·67	13·86	19·65	— 5·79	3·36	2·59	+0·77	22·53	24·82	— 2·29
	55. East Coast Central	3·51	0·57	+2·94	1·24	1·91	—0·67	14·18	20·51	— 6·33	17·68	10·19	+7·49	36·61	33·18	+ 3·43
	56. East Coast South	3·07	0·90	+2·17	2·81	3·40	—0·59	20·03	23·13	— 3·10	17·76	14·15	+3·61	43·67	41·58	+ 2·09
	57. Madras South	2·94	1·41	+1·53	6·45	4·92	+1·53	11·03	12·42	— 1·39	11·10	9·82	+1·28	31·52	28·57	+ 2·95

TABLE XXIX.—*Average actual and normal number of rainy days of the 57 meteorological divisons of India for the four seasons of the year 1901 and for the whole year.*

PROVINCE.	DIVISION.	JANUARY AND FEBRUARY.			MARCH TO MAY.			JUNE TO OCTOBER.			NOVEMBER AND DECEMBER.			WHOLE YEAR.		
		Average actual number of rainy days.	Average normal number of rainy days.	Variation of actual from normal.	Average actual number of rainy days.	Average normal number of rainy days.	Variation of actual from normal.	Average actual number of rainy days.	Average normal number of rainy days.	Variation of actual from normal.	Average actual number of rainy days.	Average normal number of rainy days.	Variation of actual from normal.	Average actual number of rainy days.	Average normal number of rainy days.	Variation of actual from normal.
BURMA	1. Tenasserim	2·9			21·8			123·6			3·7			152·0		
	2. Lower Burma Deltaic	2·3			14·8			108·8			2·6			128·5		
	3. Central do.	1·7			8·6			80·9			1·7			92·9		
	4. Upper do.	1·3			9·1			47·1			2·9			60·4		
	5. Arakan	1·2			10·3			103·2			4·9			119·6		
BENGAL AND ASSAM	6. Eastern Bengal	1·8	2·5	—0·7	14·7	19·4	—4·7	70·2	71·1	— 0·9	3·6	1·9	+1·7	90·3	94·9	— 4·6
	7. Assam Surma	1·5	4·2	—2·7	27·4	35·7	—8·3	87·2	88·2	— 1·0	4·8	2·4	+2·4	120·9	130·5	— 9·6
	8. Do. Hills	3·1	3·9	—0·8	24·8	29·4	—4·6	91·5	89·7	+ 1·8	5·0	3·2	+1·8	124·4	126·2	— 1·8
	9. Do. Brahmaputra	5·5	5·5	0	26·1	32·0	—5·9	69·7	69·1	+ 0·6	4·3	2·2	+2·1	105·6	108·8	— 3·2
	10. Deltaic Bengal	5·3	2·5	+2·8	12·3	14·0	—1·7	56·4	62·4	— 6·0	4·5	1·4	+3·1	78·5	80·3	— 1·8
	11. Central do.	4·8	2·4	+2·4	8·8	11·1	—2·3	49·3	58·7	— 9·4	2·9	1·0	+1·9	65·8	73·2	— 7·4
	12. North do.	3·4	2·1	+1·3	13·3	17·9	—4·6	61·3	65·3	— 4·0	2·4	0·5	+1·9	80·4	85·8	— 5·4
	13. Bengal Hills	4·5	3·6	+0·9	23·8	24·7	—0·9	81·6	89·7	— 8·1	3·1	1·4	+1·7	113·0	119·4	— 6·4
	14. Orissa	4·3	2·0	+2·3	9·8	9·2	+0·6	51·1	59·2	— 8·1	5·0	2·5	+2·5	70·2	72·9	— 2·7
	15 Chota Nagpur	9·5	2·8	+6·7	5·8	6·8	—1·0	49·3	58·7	— 9·4	1·4	1·1	+0·3	66·0	69·4	— 3·4
	16. South Bihar	6·2	2·6	+3·6	3·6	3·6	0	34·9	46·5	—11·6	0·8	0·6	+0·2	45·5	53·3	— 7·8
	17. North do.	5·1	2·4	+2·7	5·1	6·4	—1·3	36·8	49·7	—12·9	0·7	0·6	+0·1	47·7	59·1	—11·4
UNITED PROVINCES OF AGRA AND OUDH.	18. United Provinces East.	7·4	2·2	+5·2	2·1	2·1	0	33·8	40·9	— 7·1	0	0·6	—0·6	43·3	45·8	— 2·5
	19. South Oudh	7·4	2·0	+5·4	1·6	2·2	—0·6	28·9	37·9	— 9·0	0·3	0·7	—0·4	38·2	42·8	— 4·6
	20. North do.	7·1	2·1	+5·0	2·0	3·1	—1·1	30·5	38·1	— 7·6	0·7	0·7	0	40·3	44·0	— 3·7
	21. United Provinces Central.	6·6	1·9	+4·7	1·1	1·9	—0·8	28·4	36·2	— 7·8	0·4	0·6	—0·2	36·5	40·6	— 4·1
	22. United Provinces West.	5·7	2·2	+3·5	0·7	2·7	—2·0	21·7	27·6	— 5·9	0·8	0·5	+0·3	28·9	33·0	— 4·1
	23. United Provinces East Submontane.	6·6	2·2	+4·4	3·0	3·1	—0·1	35·5	41·6	— 6·1	0	0·5	—0·5	45·1	47·4	— 2·3
	24. United Provinces West Submontane.	9·1	4·5	+4·6	3·6	4·4	—0·8	33·5	37·3	— 3·8	1·5	1·1	+0·4	47·7	47·3	+ 0·4
	25. United Provinces Hills.	8·2	8·4	—0·2	8·3	11·8	—3·5	48·8	59·1	—10·3	1·9	1·7	+0·2	67·2	81·0	—13·8
PUNJAB AND NORTH-WEST FRONTIER PROVINCE.	26. South-East Punjab	7·1	2·5	+4·6	1·7	3·0	—1·3	16·4	22·7	— 6·3	0·5	0·8	—0·3	25·7	29·0	— 3·3
	27. South do.	4·4	2·4	+2·0	2·8	2·9	—0·1	10·9	15·5	— 4·6	0·4	0·6	—0·2	18·5	21·4	— 2·9
	28 Central do.	4·2	4·1	+0·1	5·0	4·8	+0·2	12·7	15·9	— 3·2	0	0·8	—0·8	21·9	25·6	— 3·7
	29. Punjab Submontane	9·1	4·9	+4·2	5·1	4·9	+0·2	20·0	23·8	— 3·8	0·4	1·1	—0·7	34·6	34·7	— 0·1
	30. Do. and North-West Frontier Province Hills.	15·5	8·7	+6·8	8·9	13·2	—4·3	39·4	46·0	— 6·6	1·0	2·2	—1·2	64·8	70·1	— 5·3

TABLE XXIX.—*Average actual and normal number of rainy days of the 57 meteorological divisions of India for the four seasons of the year 1901 and for the whole year*—concld.

Province.	Division.	January and February.			March to May.			June to October.			November and December.			Whole Year.		
		Average actual number of rainy days.	Average normal number of rainy days.	Variation of actual from normal.	Average actual number of rainy days.	Average normal number of rainy days.	Variation of actual from normal.	Average actual number of rainy days.	Average normal number of rainy days.	Variation of actual from normal.	Average actual number of rainy days.	Average normal number of rainy days.	Variation of actual from normal.	Average actual number of rainy days.	Average normal number of rainy days.	Variation of actual from normal.
Punjab and North-West Frontier Province—*concld.*	31. North Punjab	7·6	5·4	+2·2	11·8	7·8	+4·0	14·9	15·4	−0·5	0	1·7	−1·7	34·3	30·3	+4·0
	32. West „	2·3	2·4	−0·1	4·2	2·9	+1·3	6·0	8·6	−2·6	0	0·6	−0·6	12·5	14·5	−2·0
Bombay and Malabar Coast Districts (Madras).	33. Malabar	1·7	0·3	+1·4	15·2	13·7	+1·5	92·7	97·6	−4·9	14·3	6·2	+8·1	123·9	117·8	+6·1
	33A. Travancore	5·5			22·2			66·7			18·9			113·3		
	34. Madras South-Central	2·0	0·7	+1·3	7·6	9·3	−1·7	26·7	28·5	−1·8	10·7	7·9	+2·8	47·0	46·4	+0·6
	35. Coorg	3·1			13·2			97·4			11·2			124·9		
	36. Mysore	2·1	0·3	+1·8	9·5	8·7	+0·8	41·3	39·4	+1·9	7·1	4·9	+2·2	60·0	53·3	+6·7
	37. Konkan	0·5	0·2	+0·3	2·9	3·2	−0·3	87·1	94·3	−7·2	1·2	2·0	−0·8	91·7	99·7	−8·0
	38. Bombay Deccan	1·5	0·3	+1·2	9·4	5·6	+3·8	41·8	46·1	−4·3	1·1	3·1	−2·0	53·8	55·1	−1·3
	39. Hyderabad North	3·2			6·7			44·7			0·1			54·7		
	40. Khandesh	1·6	0·2	+1·4	2·7	2·1	+0·6	38·6	42·1	−3·5	0	2·2	−2·2	42·9	46·6	−3·7
Central Provinces and Berar.	41. Berar	3·6			3·3			41·0			0			47·9		
	42. Central Provinces West.	5·5	1·4	+4·1	4·7	2·1	+2·6	45·1	49·1	−4·0	0	1·2	−1·2	55·3	53·8	+1·5
	43. Central Provinces Central.	7·6	1·7	+5·9	5·0	2·8	+2·2	52·0	52·4	−0·4	0	1·1	−1·1	64·6	58·0	+6·6
	44. Central Provinces East.	11·3	1·7	+9·6	5·0	3·7	+1·3	51·3	49·5	+1·8	0·3	1·3	−1·0	67·9	56·2	+11·7
Bombay (North)	45. Gujarat	0·3	0·2	+0·1	0·7	0·5	+0·2	31·1	47·9	−16·8	0	0·5	−0·5	32·1	49·1	−17·0
	46. Kathiawar and Cutch	0·3	0·2	+0·1	0·6	0·6	0	18·9	27·3	−8·4	0	0·4	−0·4	19·8	28·5	−8·7
	47. Sind	1·0			1·2			2·6			0·2			5·0		
	48. Baluchistan Hills	5·2			4·6			2·5			0			12·3		
Rajputana and Central India.	49. Central India, East	3·7			1·2			36·2			0·3			41·4		
	50. Rajputana East and Central India, West.	3·5			1·1			21·1			0·2			25·9		
	51. West Rajputana	1·0			0·4			8·3			0·1			9·8		
Madras	52. East Coast North	5·2	0·6	+4·6	6·1	6·1	0	41·3	46·1	−4·8	5·1	3·5	+1·6	57·7	56·3	+1·4
	53. Hyderabad South	5·2			6·3			33·0			1·6			46·1		
	54. Madras Central	3·2	0	+3·2	5·9	4·6	+1·3	27·1	30·7	−3·6	6·5	4·1	+2·4	42·7	39·4	+3·3
	55. East Coast Central	5·5	1·1	+4·4	1·6	2·7	−1·1	26·9	28·3	−1·4	14·2	9·1	+5·1	48·2	41·2	+7·0
	56. East Coast South	4·3	1·5	+2·8	4·9	4·6	+0·3	28·8	31·3	−2·5	17·7	14·3	+3·4	55·7	51·7	+4·0
	57. Madras South	4·8	2·3	+2·5	10·3	7·6	+2·7	16·5	18·7	−2·2	14·5	12·5	+2·0	46·1	41·1	+5·0

I.—The cold weather period.—The first three weeks of January were very unsettled over the greater part of the Indian region. A series of depressions, which either advanced to North-West India from countries further to the westward, or were developed over North Bombay and the north-east of the Arabian Sea, passed from west to east across the country, and though these depressions, with one exception, only slightly affected the barometric pressure, they were accompanied with widespread showers. On the 1st snow was falling on the hills, and rain on the plains of Northern India, while some showers had extended to the central stations. On this day the sky was densely clouded all over Northern India and the air was exceedingly damp. Rain gradually ceased during the next few days and the weather improved. Throughout the previous month the existence of a low pressure area over Kathiawar, Gujarat and the adjacent parts of the Arabian Sea was a marked feature of the pressure distribution. This feature re-appeared in January, and on the 7th a depression was shown over Kathiawar. This depression moved into Gujarat and South-East Rajputana on the 8th and subsequently into the Central Provinces, where it filled up. It was throughout a shallow and ill-defined depression, but it occasioned showers all over Rajputana and the more central parts of the country. On the 10th and 11th the weather became disturbed and unsettled in Persia, while temperature rose briskly in Upper Sind and Baluchistan. These changes were followed by the appearance of a barometric depression which entered Sind on the morning of the 12th. This depression was the most important of the month, as, apparently, it gave rise to a secondary disturbance in the Punjab. This complex disturbance traversed North-Western India and was accompanied with excessively unsettled weather with heavy snow on the hills and heavy rain on the plains. After the rapid barometric rise, which succeeded the breaking up of this depression, the weather changed. The barometer rose above the normal and, though another depression developed over Kathiawar on the 16th, and thence passed eastward across the head of the Peninsula, occasioning showery unsettled weather in its progress, conditions did not become seriously disturbed after the 20th. By the 22nd pressure was higher than usual everywhere, but particularly in the north-west, and strongly marked anti-cyclonic conditions were established which practically held until the end of the month. The rainfall of the month was in excess over nearly the whole country. The excess was most marked in Chota Nagpur, the east of the United Provinces, Berar and North Madras, where the rainfall was unusually heavy. The snowfall on the Himalayas was also heavy, but in Baluchistan the total rainfall for the month was about normal.

There were in all five periods of rainfall over India during February. The most important of these was from the 11th to the 16th, when the land area surrounding the Bay received exceptionally heavy rainfall. The disturbed periods were the 1st and 2nd, when the extreme north-west received rain and snow; the 4th to the 7th, when the Punjab and the North-Western Provinces received rain; the 11th to the 16th, when parts of Bengal the Madras coast districts and Burma received very heavy rain; the 18th to the 20th, when the Deccan and Central and North-West India received general rain; and the 22nd and 23rd, when the Peninsula received rain and the Kumaun Himalayas received snow.

The rainfall of the month was absolutely or practically *nil* over the Konkan, Khandesh, Gujarat, Kathiawar and Cutch and Western Rajputana, while it averaged over seven inches in the Punjab Hills and more than three inches in Lower Burma and the central division of the east coast, and more than 4 inches in the east of the Central Provinces. The total rainfall of the month was everywhere above the normal, except in North Bombay and the adjacent districts and in part of North-East India. The excess was large in many areas; it was excessively large in parts of Burma and of the Peninsula and very large in parts of Bengal, the United Provinces and the Central Provinces.

The rainfall of the whole cold weather period was characterized by the following features:—

(1) The precipitation of the period was somewhat irregularly distributed at the hill stations in Upper India and was on the mean of the whole area in moderate to large excess. The following gives comparative data for seven stations in illustration:—

Station.	Rainfall.					
	Actual, January.	Actual, February.	Total actual of period, January and February.	Total normal of period, January and February.	Variation from normal.	Percentage variation from normal.
	Inches	Inches.	Inches.	Inches	Inches.	
Murree . . .	6·01	1·71	7·72	7·25	+0·47	+ 6
Simla . . .	6·20	9·04	15·24	5·03	+10·21	+203
Dalhousie . . .	9·84	6·33	16·17	5·80	+10·37	+179
Dharamsala . .	10·45	7·22	17·67	8·95	+8·72	+ 97
Mussoorée . . .	8·66	4·89	13·55	5·72	+7·83	+137
Ranikhet . . .	4·03	3·40	7·43	4·89	+2·54	+ 52
Kailang . . .	2·71	4·63	7·34	4·33	+3·01	+ 70

(2) The following gives the amounts of snowfall registered at five of the stations in the Western Himalayas where the measurements are believed to be most carefully taken:—

District or State.	Station.	Total snowfall in the month of				Approximate normal snowfall of period.
		Height, in feet, above sea-level.	January.	February.	Total.	
			Ft. In.	Ft. In.	Ft. In.	Ft. In.
Rawalpindi .	Murree .	6,333	7 11	4 9	12 8	11 9
Lahoul . .	Kailang .	10,087	1 10	3 8	5 6	4 7
Chamba .	Kalatap .	8,000	5 9	7 0	12 9	9 11
Kumaon .	Pindari Pass	...	8 0	4 6	12 6	13 5*
	Ratumdhura Pass .	...	16 0	18 0	34 0	33 3*

* Mean of 4 years.

(3) The rainfall of the period was more or less below the normal in Baluchistan, Sind, West Rajputana and Kathiawar and Cutch in the west of India and in Assam and East Bengal in the east. The deficiency was, however, small, except in Baluchistan and Assam Surma, which obtained only 49 and 19 per cent., respectively, of their normal amounts. The following gives comparative data for the regions of deficient rainfall during the cold weather period :—

Area.	Rainfall of period, January and February.			
	Average actual.	Average normal.	Variation from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Eastern Bengal	0·74	1·42	—0·68	—48
Assam, Surma	0·45	2·38	—1·93	—81
„ Hills	1·22	1·86	—0·64	—34
„ Brahmaputra	1·93	2·12	—0·19	— 9
Kathiawar and Cutch	0·07	0·14	—0·07	—50
Sind	0·35	0·71	—0·36	—51
Baluchistion Hills	1·89	3·84	—1·95	—51
West Rajputana	0·34	0·43	—0·09	—21

(4) The rainfall of the period was in excess of the normal over the remainder of the country. The excess averaged more than one inch in the areas for which data are given below :—

Area.	Rainfall of period, January and February.			
	Average actual.	Average normal.	Variation from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Deltaic Bengal	2·70	1·63	+1·07	+ 66
Orissa	4·34	1·16	+3·18	+274
Chota Nagpur	6·41	1·42	+4·99	+351
South Bihar	3·56	1·30	+2·26	+174
United Provinces East	4·19	0·99	+3·20	+ 32
South Oudh	3·34	0·95	+2·39	+252
North „	3·70	1·09	+2·61	+239
United Provinces Central	2·94	0·78	+2.16	+277
„ „ West	2·40	0·88	+1·52	+173
„ „ East Submontane	3·59	0·98	+2·61	+266
„ „ West „	4·83	2·51	+2·32	+ 92
„ „ Hills	7·46	4·79	+2·67	+ 56
South East Punjab	2·49	1·13	+1·36	+120
Punjab Submontane	5·78	90	+2·88	+ 99
Punjab and North-West Frontier Province Hills	13·14	6·55	+6·59	+101
North Punjab	4·95	3·23	+1·72	+ 53
Mysore	1·41	0·18	+1·23	+683
Hyderabad North	1·66	0·17	+1·49	+876
Berar	2·27	0·65	+1·62	+249
Central Provinces West	2·53	0·77	+1·76	+229
„ „ Central	3·33	0·77	+2·56	+332
„ „ East	5·85	0·82	+5·03	+613
Madras East Coast North	3·55	0·50	+3·05	+610
Hyderabad South	2·59	0·24	+2·35	+979
Madras Central	2·18	0·12	+2·06	+1,717
„ East Coast Central	3·51	0·57	+2·94	+516
„ „ „ South	3·07	0·90	+2·17	+241
„ South	2·94	1·41	+1·53	+109

The preceding data indicate that the rainfall of the season was largely above the normal over nearly the whole of the Peninsula, Upper India, the Gangetic Plain and Bengal, and that the excess was most marked in the Punjab Hills (6·59 inches), the Central Provinces East (5·03 inches) and Chota Nagpur (4·99 inches).

(5) The average rainfall of the period for the whole of the plains of India was 2·44 inches, and was 1·45 inches, or 146 per cent., in excess of the normal of the period.

II.—The hot weather period.—The rainfall of the month of March was actually or practically *nil* (*i.e.*, was less than one-tenth of an inch) over the South-West Punjab, the greater part of Rajputana, nearly the whole of the Bombay Presidency, and across the centre of Peninsula. It was also *nil* over the greater part of Burma. South India received numerous thundershowers about the middle of the month and Ceylon had thunder-storms accompanied with rain at intervals throughout the month. The principal periods of rainfall in Northern and Central India were initiated by cold weather disturbances in Upper India. Between the 1st and 5th there were showers over the central parts of the country; between the 6th and the 8th there was general snow on the north-west hills and rain spread eastward from the Punjab to Bengal; between the 19th and the 24th there were scattered showers over Central and North-East India and general showers in North-West India; and on the 30th and 31st there was general snow on the North-West Himalayas and general showers on the adjacent plains. One of the chief features of the rainfall of the month was the relatively heavy rain over North-West India and parts of the Peninsula; another was the unusual lightness of the fall over Inland Burma and North East India. In other parts of the country the variations from normal were irregular.

April was drier than usual over a large part of the country. The only important exceptions were Assam, East Bengal, Deltaic Bengal, Orissa, Chota Nagpur, the North Punjab, the west and south of the Peninsula and the Central Provinces, in all of which areas the rainfall was equal to or in excess of the normal. The excess in the west of the Peninsula and the central parts of the country was very large relatively to the small normal fall: in the former area it was due to a cyclonic storm in the Arabian Sea. On the other hand, over the greater part of Northern India from Bihar westward to the Punjab and Rajputana, as well as over parts of the east of the Peninsula, the month's rainfall was very small and in several places actually or practically *nil*. A series of slight depressions entered North-West India from the westward during the month, occasioning snow on the hills and some rain in the submontane areas but otherwise the influence of these depressions was small. Towards the close of the month the barometer rose over Northern and Central India, but was low over the Peninsula and the Arabian Sea in consequence of the development of a cyclonic storm in the latter area, which gave moderately heavy rain over the Peninsula, more particularly in the west, and raised the month's total rainfall above the normal average in that area.

The principal features of the rainfall distribution of the month were deficiency of rain in Burma, Northern India (except Assam and the areas round the head of the Bay) and in the east of the Peninsula and excess of rain over the west of the Peninsula, the central parts of the country, Orissa and Deltaic and East Bengal.

During the month of May the weather was more showery and disturbed than usual over the greater part of the interior of the Peninsula the Bombay Deccan, Mysore and part of Madras, the rainfall of the month being largely above normal in Central Madras. At the beginning of the month a severe storm in the extreme north-west gave exceptionally heavy and widespread rainfall in that area, and the totals of the month were in large excess in Baluchistan, Sind, the greater part of the Punjab and the east submontane divisions of the United Provinces. In other parts of the country the rainfall of the month varied from normal to large defect. The usual spring showers in North-East India and Assam were both lighter and fewer than usual; consequently in Arakan, East Bengal, Assam and Chota Nagpur the rainfall of the month was only about half the normal average. In parts of the United Provinces the month's rainfall was very light, averaging only 0·05″ in the western division. Central India and Rajputana had almost equally light rainfall, the average for the month over those areas ranging between 0·10″ and 0·16″, or only a little more than one-quarter of the normal amount. No advances of monsoon winds occurred over the south of the Peninsula, but a feeble depression which struck the Arakan coast on the 25th brought up the monsoon with it over the east of the Bay and Burma, and from about the 21st to the end of the month steady monsoon rainfall was received over Tenasserim and Burma.

The following sums up the principal features of the distribution of rainfall during the period :—

1st.—The rainfall in Burma was normal or in excess in March and generally in defect in April and May, and was on the mean of the whole period normal in Upper Burma, in moderate defect in Lower Burma and largely below normal in Tenasserim, Arakan and Central Burma.

The following gives comparative data :—

Division.	Variation of rainfall from normal.				
	March.	April.	May.	Total of period March to May.	Percentage variation from normal.
	Inches.	Inches.	Inches.	Inches.	
Tenasserim	+1·09	—3·03	—7·00	—8·94	—32
Lowe Burma Deltaic . . .	+0·29	—1·47	—1·93	—3·11	—22
Central „	—0·03	—0·87	—1·48	—2·38	—31
Upper „	—0·19	—0·40	+0·14	—0·45	— 6
Arakan	—0·34	—1·26	—2·35	—3·95	—28

2nd.—Bengal and Assam obtained less than the usual amount of rain, the deficiency being most marked in Assam, East and North Bengal and Sikkim.—the districts which usually receive moderately heavy rain in April and May.

The following gives data for this area :—

Division.	Variation of rainfall from normal.				
	March.	April.	May.	Total of period, March to May.	Percentage variation from normal.
	Inches.	Inches.	Inches.	Inches.	
Eastern Bengal	—2·23	+0·54	—4·65	—6 34	—37
Assam Surma	—6·13	+2·53	—10·74	—14·34	—37
„ Hills	—2·86	+0·39	—6·96	—8·83	—32
„ Brahmaputra . . .	—2·27	—1·03	—5·64	—8·94	—38
Deltaic Bengal	—1·56	+1·32	—0·56	—0 80	— 8
Central „	—0 84	—0·31	—0·22	—1·37	—18
North „	—0·91	—2·89	—2·57	—6·37	—40
Bengal Hills	—0·11	—2·67	—4·35	—7·13	—39
Orissa	—0·77	+0·60	—1·48	—1·65	—24
Chota Nagpur	—0·48	+0·04	—1·11	—1·55	—38
Bihar, South	+0·01	—0·18	+0·01	—0·16	— 7
„ North	0	—0·70	0	—0·70	—16

3rd.—The rainfall of the period was normal or in defect in Northern and Central India, with the exception of the part of the Punjab which obtained a heavy burst of rain from

a cyclonic storm in the first week of May. The following gives data:—

Division.	Variation of rainfall from normal.				
	March.	April.	May.	Total of period, March to May.	Percentage variation from normal.
	Inches.	Inches.	Inches.	Inches.	
United Provinces East	+0·43	—0·11	—0·23	+0·09	+10
South Oudh	—0·09	—0·07	—0·38	—0·54	—55
North „	—0·24	—0·13	—0·51	—0·88	—57
United Provinces Central	—0·13	—0·05	—0·26	—0·44	—60
„ „ West	—0·25	—0·14	—0·43	—0·82	—79
„ „ East Submontane	+0·04	—0.25	+0·31	+0·10	+6
„ „ West „	+0·01	—0·25	—0 10	—0·34	—16
„ „ Hills	—0·74	—0·78	—0·14	—1·66	—30
South-East Punjab	—0·11	—0·25	—0·39	—0·75	—58
South „	+0·07	—0·31	—0·16	—0·40	—29
Central „	—0·03	—0·20	+1·17	+0·94	+40
Punjab Submontane	+0.23	—0·58	+0·65	+0·30	+11
Punjab and North-West Frontier Province Hills.	—0·30	—1·78	+0·69	—1·39	—16
North Punjab	+0·67	—0·10	+4·84	+5·41	+109
West „	—0·04	—0·12	+1·56	+1·40	+100
Central Provinces West	+0·58	+0·38	—0·25	+0·71	+75
„ „ Central	+0·82	+0·44	—0·25	+1·01	+80
Gujarat	+0·02	+0·08	—0·09	+0·01	+3
Kathiawar and Cutch	—0·04	—0·06	—0·03	—0·13	—35
Sind	—0·14	—0·19	+0·24	—0 09	—15
Central India East	—0·06	—0·01	—0·29	—0·36	—48
Rajputana East and Central India West.	—0·13	—0·04	—0·35	—0·52	—64
West Rajputana	—0·11	—0·05	—0·38	—0·54	—75

4th.—Weather was drier than usual in Baluchistan in March and April, and the rainfall was hence in slight defect. Heavy rain occurred in the first week of May, which gave total amounts for the month considerably in excess of the normal and brought the total precipitation of the season to moderately over normal, as is shown by the following data:—

Area.	Variation of rainfall from normal.				
	March.	April.	May.	Total of period, March to May.	Percentage variation from normal.
	Inch.	Inch.	Inches.	Inch.	Inch.
Baluchistan	—0·23	—0·27	+1·49	+0·99	+59

5th.—The precipitation of the period was in light to moderate defect in Malabar, the central and southern coast districts of Madras, as well as in South-Central Madras; it was about normal in Mysore, the Konkan, Khandesh, Berar and the eastern districts of the Central Provinces and in slight to considerable excess in the remainder of the Peninsula. The deficiency was largest in actual amount in Malabar in consequence of the scanty fall in May.

The following gives data:—

Division.	Variation of rainfall from normal.				
	March.	April.	May.	Total of period, March to May.	Percentage variation from normal.
	Inches.	Inches.	Inches.	Inches.	
Malabar	+0·60	+0·68	—2·30	—1·02	— 9
Madras South Central	—0·33	—0 82	+0·74	—0·41	— 7
Mysore	—0·22	—0·04	+0·71	+0·45	+ 9
Konkan	+0·03	+0·74	—0·75	+0·02	+ 1
Bombay Deccan	+0·18	+1·65	+0·63	+2·46	+ 88
Hyderabad North	+0·60	+1·38	+0·08	+2·06	+145
Khandesh	+0·16	+0·22	—0·42	—0·04	— 3
Berar	+0·17	+0·23	—0·31	+0·09	+ 7
Central Provinces East	+0·59	—0·14	—0·35	+0 10	+ 5
Madras East Coast North	—0·29	+0·17	+0·37	+0·25	+ 7
Hyderabad South	—0·25	+2·33	—0·05	+2·03	+ 91
Madras Central	—0·18	—0·03	+0·88	+0·67	+ 27
„ East Coast Central	—0·17	—0·45	—0·05	—0 67	— 35
„ „ „ South	—0·09	—0·34	—0·16	—0·59	— 17
„ South	+1·12	+0·41	0	+1·53	+ 31

III.—The south-west monsoon period.—The monsoon set in somewhat later than usual on the West Coast and about the normal date on the Bengal Coast. The initial advance was not so vigorous as usual and failed to penetrate inland. Hence over the greater part of the interior the burst of heavy continuous rain which marks the beginning of the south-west monsoon rains proper did not occur until the second week in July.

The following gives the dates of the establishment of the monsoon (*i.e.*, of the first burst of heavy monsoon rainfall) in different parts of India:—

Province or Division.	Date of commencement of the monsoon rains in 1901.
Malabar	6th June.
Konkan	11th „
Kathiawar	7th July.
Central Provinces	28th June.

Province or Division.	Date of commencement of the monsoon rains in 1901.
Central India	5th July.
Rajputana	8th „
Bengal	13th June.
Chota Nagpur	6th July.
Bihar	6th „
United Provinces	9th „
Punjab	9th „

The monsoon currents were feebler than usual in July and of normal strength in August. The Bay current was fairly strong in September. The Bombay current, on the other hand, was considerably weaker than usual in the latter month and retreated in the first week from North-West and Central India, or nearly a fortnight before its normal date. The following gives the approximate dates of the termination of the rains in India:—

Province or Division.	Date of termination of the monsoon rains in 1901.
Malabar	28th October.
North Konkan	13th September.
Kathiawar	13th „
Central Provinces	25th „
Central India	25th „
Rajputana	2nd „
East Punjab	5th „
United Provinces	26th „
Bihar	27th „
Bengal	9th October.
Burma	24th „
Tenasserim	2nd November.

The following is a brief statement of the more important features of the rainfall of the period, firstly, from month to month, and, secondly, for the whole period:—

June.—The chief features in the meteorology of the month were the delays in the extension of the Arabian Sea monsoon current into North Bombay and the interior of the Peninsula, and of the Bengal monsoon current into West Bengal and the Gangetic Plain. Monsoon rainfall commenced in Malabar on the 6th and extended into the Konkan on the 11th or 12th, but did not advance north of Bombay, so that, although Gujarat received irregular and at times heavy rainfall, Kathiawar and Sind received no rain of importance throughout the month. The monsoon also failed to extend over Berar, the Central Provinces, the east of Rajputana and the west of the United Provinces, where practically the only rainfall received was a feeble burst between the 13th and 16th, coincident with the establishment of the monsoon on the Konkan Coast. About the 21st the rainfall diminished somewhat along the West Coast, and over the interior of the country the showers became lighter and less general. In Bengal the monsoon was ushered in by the advance of a feeble and shallow storm about the 13th, which gave a general though moderate burst of rain over West Bengal and the Gangetic Plain between the 13th and the 16th, but this was practically the only monsoon rainfall during the month. A showery period, due to disturbed weather in the Kashmir Himalayas, prevailed in the North and West Punjab from the 21st to the 25th. The rainfall of the interior of the country was almost everywhere deficient, due to the failure of the monsoon to extend inland.

July.—The rainfall of the month of July was irregularly distributed. During the first week the rainfall, due to the Arabian Sea current, was practically confined to the West Coast from Bombay southwards, the rainfall of the Bay current being restricted to Burma and North-East India.

The whole of the interior of the country was rainless, except for a few scattered showers. About the 8th slight depressions appeared in different parts of Northern India and a rapid extension of the monsoon current gave fairly general rain from the 8th to the 12th. After the latter date a break set in and continued up to the 16th or 17th, during which period rain was again confined to the West Coast and to Burma and North-East India, the whole of the central and north-western districts of the country being practically rainless. Between the 17th and the end of the month a series of very shallow and diffused depressions passed from the Bay into North-West India and during that time rain fell daily over a large part of Northern India. The amounts were not, however, generally heavy, so that the deficiency due to the delay in the full establishment of the rains and to the partial break between the 12th and the 17th, was not obliterated by the more general rainfall between the 18th and the close of the month. Only in Orissa, part of the East Coast, the central and submontane districts of the Punjab, Baluchistan, Malabar, Mysore and the Konkan was the total rainfall of the month in excess. But, although in the remainder of the country the total rainfall was short of the normal, the deficiency was not generally large or important and in most areas was less than 20 per cent. The area of greatest defect of rainfall included a large part of Northern India, the deficiency ranging from 24 per cent. in the Assam Hills to 54 per cent. in Kathiawar and Cutch.

August.—The distribution of the rainfall of the month was determined mainly by the barometric depressions of the month. The Arabian Sea monsoon current was slightly weaker than normal, but the rainfall along the West Coast, on the mean of the month, was approximately normal. The Bay of Bengal monsoon current was of the normal strength and the rainfall was above the normal on the Burma and Arakan Coasts, and about normal in Bengal. Six depressions developed over the Indian area during the month. Most of these were initiated over Bengal and were hence generally of feeble intensity. Their general course lay through Bengal, Chota Nagpur or South Bihar, the east of Central India, the north of the Central

Provinces and part of the United Provinces. The month's rainfall was generally in excess over Chota Nagpur, South Bihar, the east of Central India, the whole of the Central Provinces and Bihar, the greater part of the United Provinces and in the Punjab Hills. On the other hand, the monsoon currents only occasionally spread over Kathiawar, Sind, Rajputana and the Punjab, so that practically the whole of North-West India had less rain than usual, the deficiency in most areas being large. Over the interior and east of the Peninsula the rainfall was also short of the normal. As stated above, the Arabian Sea monsoon current gave about normal rain to the West Coast districts and this rainfall extended into the Bombay Deccan, but in Mysore, Hyderabad and the Madras districts the rainfall was in slight to considerable defect. There was a heavy burst of rain over the stations in the Kumaon Himalayas between the 20th and the 24th.

September was an abnormally dry month over the greater part of India, due to the weakness of the monsoon currents and their early withdrawal from a large part of the country. Two storms affected the weather during the month and occasioned rain over North-East India during the first ten days and the last ten days of the month, while in the intervening period, with the exception of thunderstorms over the Peninsula, the weather was exceptionally dry.

The rainfall was much heavier than usual on the Arakan Coast and was normal or slightly heavier than usual over other parts of Burma. In Assam the rainfall was on the whole lighter than the average. In North Bengal and the Bengal Hills and North Bihar the month's rainfall was less than usual, but in other parts of Bengal the month's fall was normal or in some excess due principally to the heavy rainfall which accompained the first cyclonic storm of the month. The east of the United Provinces, South Oudh and the hills division had normal rainfall during th e month, but over the remainder of the United Provinces the rainfall was very scanty. This deficiency of rain extended westward to all parts of the Punjab (except the North Punjab). Rajputana, Central India, Sind and Baluchistan. The Bombay or Arabian Sea monsoon cur rent was weak throughout the month and Gujarat, the West Coast, Berar and the west of the Central Provinces all received considerably less rain than usual. Over the interior and south of the Peninsula the weather was disturbed with numerous thunderstorms and the month's rainfall was heavier than usual over a large part of this area.

The second cyclonic storm of the month gave heavy rain to the East Coast and to the east of the Central Provinces and, as a consequence, the rainfall over these areas was generally normal or in only slight defect.

The following summarizes the chief fearures of the distribution of the rainfall of the south-west monsoon period, June to September, and also June to October :—

(1) The rainfall of the period, June to October, was more or less in defect in all the provinces of India and in excess in Burma.

The following gives data showing the genera deficiency :—

Province.	RAINFALL OF PERIOD.							
	June to September.				June to October.			
	Average actual, 1901.	Average normal.	Variation of actual from normal.	Percentage variation from normal.	Average actual, 1901.	Average normal.	Variation of actual from normal.	Percentage variation from normal.
	Inches.	Inches	Inches.		Inches.	Inches.	Inches.	
Burma . .	87·70	91·31	—3·61	—4	99·05	98·04	+1·01	+1
Assam . . .	68·41	71·49	—3·08	—4	74·88	77·21	—2·33	—3
Bengal . .	44·46	49·28	—4·82	—10	46·64	53·29	—6·65	—12
Unitd Provinces of Agra and Oudh	28·16	33·18	—5·02	—15	28·40	34·70	—6·30	—18
Punjab . .	10·71	14·83	—4·12	—28	10·88	15·14	—4·26	—28
Sind . . .	1·33	4·48	—3·15	—70	1·33	4·51	—3·18	—71
Bombay . .	43·26	47·45	—4·19	—9	45·97	51·70	—5·73	—11
Central Provinces and Berar.	39·74	41·63	—1·89	—5	40·69	43·75	—3·06	—7
Central India .	31·40	38·58	—7·18	—19	31·57	40·08	—8·51	—21
Rajputana . .	10·66	18·49	—7·83	—42	10·90	18·70	—7·80	—42
Gujarat . .	18·30	34·33	—16·03	—47	18·78	35·36	—16·58	—47
Madras . .	24·87	26·28	—1·41	—5	29·37	33·04	—3·67	—11

(2) The rainfall of the period was locally in excess in the areas for which data are given below :—

Division.	RAINFALL OF PERIOD.							
	June to September.				June to October.			
	Average actual, 1901.	Average normal.	Variation of actual from normal.	Percentage variation from normal.	Average actual, 1901.	Average normal.	Variation of actual from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.		Inches.	Inches.	Inches.	
Upper Burma .	27·37	25·58	+1·79	+7	34·18	29·78	+4·40	+15
Eastern Bengal .	71·73	63·27	+8·46	+13	78·02	68·86	+9·16	+13
United Provinces Hills.	52·24	48·73	+3·51	+7	53·00	50·06	+2·94	+6
Madras South-Central.	13·65	12·01	+1·64	+14	18·92	18·15	+0·27	+4
Mysore . .	20·53	20·42	+0·81	+1	27·36	25·94	+1·42	+5
Central Provinces Central.	49·53	47·05	+2·48	+5	49·82	48·90	+0·92	+3

(3) The deficiency was considerable to large over the reater part of North-Western India and small over the reater part of the Peninsula and North-East India It

exceeded 25 per cent. in amount in the following divisions:—

Division.	RAINFALL OF PERIOD.							
	June to September.				June to October.			
	Average actual, 1901.	Average normal.	Variation of actual from normal.	Percentage variation from normal.	Average actual, 1901.	Average normal.	Variation of actual from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.		Inches.	Inches.	Inches.	
South Bihar .	28·56	37·10	—8·24	—22	29·24	39·70	—10·46	—26
North „	31·17	44·69	—13·52	—30	31·44	47·48	—16·04	—34
North Oudh .	26·34	34·28	—7·94	—23	26·44	35·89	—9·45	—26
United Provinces West.	16·11	23·52	—7·41	—32	16·53	24·06	—7·53	—31
South-East Punjab	12·77	20·40	—7·63	—37	12·80	20·76	—7·96	—38
South „	7·86	13·00	—5·14	—40	7·96	13·21	—5·25	—40
Central „	9·97	13·65	—3·68	—27	10·00	14·00	—4·00	—29
West „	3·81	6·12	—2·31	—38	3·81	6·22	—2·41	—39
Gujarat . .	24·55	42·03	—17·48	—42	25·26	43·39	—18·13	—42
Kathiawar and Cutch.	12·05	26·63	—14·58	—55	12·30	27·32	—15·02	—55
Sind . . .	1·33	4·48	—3·15	—70	1·33	4·51	—3·18	—71
Baluchistan Hills .	1·34	2·33	—0·99	—42	1·34	2·43	—1·09	—45
Rajputana East and Central India West.	15·43	25·87	—10·44	—40	15·77	26·21	—10·44	—40
West Rajputana .	5·88	11·11	—5·23	—47	6·02	11·18	—5·16	—46
Madras Central .	11·15	14·81	—3·66	—25	13·86	19·65	—5·79	—29
Madras East Coast Central.	10·48	11·83	—1·35	—11	14·18	20·51	—6·33	—31

The rainfall of the whole monsoon period was hence, relatively to the normal, most largely in defect in Sind, Kathiawar, Rajputana, Gujarat, Baluchistan and the South Punjab.

The following table gives the percentage deficiency in these divisions, month by month, during the season :—

Division.	Rainfall percentage variation from normal.				
	June.	July.	August.	September.	October.
Sind	—100	—40	—89	—100	—100
Kathiawar and Cutch . .	—65	—54	—31	—84	—64
West Rajputana . . .	—93	—16	—39	—96	+100
Baluchistan Hills . . .	—100	+7	—70	—60	—100
Gujarat	—50	—35	—7	—90	—48
South Punjab	—81	—15	—25	—87	—52
Rajputana East and Central India West.	—80	—24	—22	—92	0

IV.—The retreating south-west monsoon period.—October was on the whole slightly more disturbed than usual over the Bay area, but over the extreme north-west the number of disturbed periods was about normal or in slight excess. The storms, though slightly more numerous than the average, were not accompanied with much rain, and the general dryness which had characterised the greater part of the year did not disappear under the influence of these disturbances either in the Bay area or in the north-west. A very shallow depression appeared over the Punjab on the 1st. It was stationary over the West Punjab on the 2nd, 3rd and 4th, after which date it was transferred eastward through the Punjab into the west of the United Provinces, where it filledup on the 6th. The disturbance gave cloudy weather but practically no rain to the greater part of the Punjab, but during the 3rd, 4th and 5th moderate snow was received on the Afghan mountains and on the ranges of the Kashmir and North-West Himalayas, and rain and hail over the submontane regions of the Punjab. A shallow depression was shown over Burma and the Bay on the 3rd. On that and the following day barometric gradients increased over the south of the Bay accompanied with a strengthening of the south-west winds in the south, and the depression over the centre of the Bay underwent a marked and rapid development. The storm thus initiated formed the principal feature in the weather until the 10th. The storm passed along a curved path over the Bay, finally striking the Bengal coast near Barisal and breaking up over East Bengal on the 10th. The rainfall accompanying the storm was heavy only in Arakan on the 6th and in Bengal on the 9th. During the 11th, 12th and 13th, when the weather was generally quiet over the Indian area a depression developed over the centre of the Bay. The storm struck the Circars coast near Waltair on the 14th, and thence passed in a north-westerly direction across the head of the Peninsula to Gujarat, finally disappearing over the north of the Arabian Sea on the 18th. Heavyish rain was received on the Circars coast on the 14th and 15th, and moderate rain accompanied the storm in its subsequent course across the Peninsula. There was actually or practically no rain throughout the month over a large part of North-Western India, and over nearly the whole of the remainder of India the average actual rainfall of the month was more or less in defect. The only important exception was in the north-east, where East Bengal and the Assam divisions reported normal or slightly excessive rain.

The weather in November was quiet over the greater part of the country from the 1st to the 13th. The retreating south-west monsoon gave more or less rain daily to the Peninsula south of Lat. 15°N., while the whole of Northern and Central India experienced fine and quiet weather with a high temperature. On the 13th the weather changed over the Bay and cyclonic conditions were established, and during the whole period from the 14th to the end of the month the weather over at least Southern and Eastern India was more or less influenced by cyclonic storms, one of which was of considerable intensity. The storms were, however, confined to the Bay area,

and the weather in North-Western and Central India was uninterruptedly fine throughout the whole month.

The month was practically rainless over the whole of North-Western and Central India and part of the Deccan. The actual rainfall of the month was in moderate to large excess of the normal over the south and east of the Peninsula, Bengal and Assam, while in Burma the variations from the normal were irregular. Very heavy rain was received on the 16th in Orissa and Ganjam from the first cyclonic storm of the month. Very light snow showers were received in parts of Kashmir during the month, but neither rain nor snow fell in Baluchistan or the Persian area.

The weather in December was, on the whole, finer than usual. Two disturbed periods were, however, experienced, the first covering the first twelve days of the month when conditions were stormy over the south of the Bay and the southern half of the Peninsula owing to a feeble depression, and the second covering the three days from the 25th to the 27th when a land-formed depression in North-West India gave rain and snow to the hills and rain to the submontane districts of Northern India.

The month was abnormally dry over the greater part of India and of Burma, and apparently this abnormal dryness extended westward over Baluchistan, Persia and Arabia, where, judging from the scanty data available, the total rainfall of the month was unusually light. The rainfall of the month was in excess over parts of the hill and submontane districts of Bengal and of the United Provinces due to the rain and snow accompanying a depression which lay over Gujarat and Rajputana on the 25th and thence travelled north-eastward to Central India on the two following days. The total rainfall of the month was also in excess in Malabar, Central Madras and the central and south divisions of the East Coast due to the heavy rainfall accompanying a depression which formed over the south of the Bay on the 6th and 7th and thence passed westward across the south of the Bay and the south of the Peninsula. The rainfall from this disturbance was particularly heavy in Chingleput on the 10th. Over the whole of the remainder of India the rainfall of the month was lighter than usual and over a large area of country, including the greater part of Burma, Assam, Bengal, the United Provinces and the Punjab, and the whole of Rajputana, Bombay, the Central Provinces, Central India, the Deccan and North Madras, the total rainfall of the month was less than one-tenth of an inch.

The following is a summary of the more important features of the rainfall of the period.

(1) The rainfall was in moderate to considerable excess over the greater part of Burma in October and in slight defect in November and December. On the mean of the whole period there was a large excess in Tenasserim and a slight to moderate excess in Burma proper.

The following gives data for the five divisions of the province :—

Division.	Variation of rainfall from normal.				
	October.	November.	December.	Total of period, October to December.	Percentage variation from normal.
	Inches.	Inches.	Inch.	Inches.	
Tenasserim . .	+7·20	+0·97	+0·15	+8·32	+70
Lower Burma Deltaic.	+3·94	—1·80	—0·15	+1·99	+16
Central Burma . .	+1·02	—0·59	—0·07	+0·36	+ 5
Upper Burma . .	+2·19	—0·18	—0·54	+1·47	+23
Arakan . . .	+3·53	+0·66	—0·27	+3·92	+30

(2) The rainfall of the period was in slight to considerable excess in Assam, Bengal (except the northern and central districts and Sikkim) and Orissa, due chiefly to cyclonic weather in the second half of November.

It was, on the other hand, more or less in defect in North and Central Bengal, Bihar and Chota Nagpur, the deficiency being greatest, both absolutely and relatively to the normal, in North Bihar, which only obtained 18 per cent. of its normal quantity.

The following gives data :—

Division.	Variation of rainfall from normal.				
	October.	November.	December.	Total of period, October to December.	Percentage variation from normal.
	Inches.	Inches.	Inch.	Inches.	
Eastern Bengal . .	+0·70	+3·12	—0·29	+3·53	+49
Assam Surma . .	+2·00	+2·01	—0·39	+3·62	+42
„ Hills . .	+3·90	+3·21	—0·48	+6·63	+70
„ Brahmaputra .	—0·51	+3·68	—0·32	+2·85	+50
Deltaic Bengal . .	—1·99	+2·91	—0·18	+0·74	+13
Central „ . .	—2·12	+1·59	—0·11	—0·64	—15
North „ . .	—2·77	+0·88	—0·05	—1·94	—40
Bengal Hills . .	—3·07	+0·48	+0·26	—2·33	—35
Orissa . . .	—2·04	+3·56	—0·31	+1·21	+16
Chota Nagpur . .	—1·66	—0·08	—0·23	—1·97	—54
South Bihar . .	—2·22	+0·07	—0·15	—2·30	—77
North „ . .	—2·52	+0·14	—0·10	—2·48	—82

(3) The rainfall of the period was scanty and in marked defect in the United Provinces and North-Western and Central India. The deficiency was considerable to large over the greater part of the United Provinces and Central India, due largely to the almost complete absence of rain in October.

The following gives data:—

Division.	Variation of rainfall from normal.				
	October.	November.	December.	Total of period, October to December.	Percentage variation from normal.
	Inches.	Inch.	Inch.	Inches.	
United Provinces, East	—2·11	—0·11	—0·26	—2·48	—97
South Oudh	—1·44	—0·02	—0·34	—1·80	—89
North ,,	—1·51	—0·04	—0·22	—1·77	—87
United Provinces, Central	—0·86	—0·04	—0·21	—1·11	—78
,, ,, West	—0·12	—0·01	—0·15	—0·28	—31
,, ,, East Submontane.	—2·40	—0·05	—0·20	—2·65	—86
,, ,, West Submontane.	—0·49	—0·13	+0·10	—0·52	—36
,, ,, Hills	—0·57	—0·22	+0·55	—0·24	—12
South East Punjab	—0·33	—0·03	—0·12	—0·48	—70
South ,,	—0·11	—0·06	—0·15	—0·32	—59
Central ,,	—0·32	—0·21	—0·30	—0·83	—97
Punjab Submontane	—0·22	—0·17	—0·44	—0·83	—73
Do. and North-West Frontier Province Hills	—0·71	—0·72	—0·23	—1·66	—66
North Punjab	+0·19	—0·76	—0·61	—1·18	—64
West ,,	—0·10	—0·18	—0·15	—0·43	—100
Sind	—0·03	—0·07	—0·07	—0·17	—81
Central India East	—1·33	—0·33	—0·30	—1·96	—88
Rajputana East and Central India West	0	—0·19	—0·27	—0·46	—55
West Rajputana	+0·07	—0·12	—0·10	—0·15	—47

(4) The season was throughout rainless in Baluchistan, where usually light to moderate rain falls in November and December from cold weather disturbances.

The following gives data:—

Division.	Variation of rainfall from normal.				
	October.	November.	December.	Total of period, October to December.	Percentage variation from normal.
	Inch.	Inch.	Inch.	Inches.	
Baluchistan	—0·10	—0·64	—0·98	—1·72	—100

(5) The rainfall of the period was less than usual over the whole of the Peninsula with the exception of Malabar, Mysore, the northern and central coast districts of Madras and South-Central Madras. The excess was large in Malabar, where it averaged 7·55 inches or 56 per cent. of the normal. The defect was unimportant in the southern coast districts, but increased north-westwards and was serious in the Konkan, the Central Provinces, Khandesh and the Bombay Deccan.

The following gives data for the Peninsular divisions:—

Division.	Variation of rainfall from normal.				
	October.	November.	December.	Total of period, October to December.	Percentage variation from normal.
	Inches.	Inches.	Inches.	Inches.	
Malabar	—1·17	+7·74	+0·98	+7·55	+56
Madras South Central.	—0·87	+1·63	—0·09	+0·67	+ 6
Mysore	+1·31	+0 28	—0·02	+1·57	+18
Konkan	—3·41	—0·73	—0·05	—4·19	—62
Bombay Deccan	—1·85	—1·06	—0·38	—3·29	—48
Hyderabad North	—0·04	—1·12	—0·75	—1·91	—40
Khandesh	—0·84	—0·91	—0·56	—2·31	—45
Berar	—0·43	—0·64	—0·54	—1·61	—44
Central Provinces West.	—1·73	—0·38	—0·52	—2·63	—88
Central Provinces Central.	—1·56	—0·37	—0·33	—2·26	—89
Central Provinces, East.	—0·96	—0·39	—0·30	—1·65	—58
Gujarat	—0·65	—0·18	—0·06	—0·89	—56
Kathiawar and Cutch.	—0·44	—0·32	—0·03	—0·79	—75
Madras East Coast North.	—1·55	+3·43	—0·55	+1·33	+13
Hyderabad South	—0·46	—0·54	—0·31	—1·31	—29
Madras Central.	—2·13	+0·59	+0·18	—1·36	—18
,, East Coast Central.	—4·98	+5·13	+2·36	+2·51	+13
,, East Coast South.	—3·68	+1·95	+1·66	—0·07	•
,, South	—3·19	+2·80	—1·52	—1·91	—11

The year.—The rainfall of the year for the whole of India, as determined by the method employed by Mr. Blanford (and which gives the normal annual rainfall as 41·09 inches), averaged 4·13 inches below the normal.

The average rainfall of the Indian area was very largely above normal in the cold weather, considerably above in the retreating south-west monsoon and in moderate defect in the hot weather and the south-west monsoon periods.

The following gives comparative data for the whole of India (excluding Burma and hill divisions) based on the arithmetical means of the actuals and normals for 46 rainfall divisions (irrespective of extent of area):—

Period.	Rainfall.			
	Average actual of year 1901.	Average normal of year.	Variation from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Cold weather	2·44	0·99	+1·45	+146
Hot weather	3·91	4·58	—0·67	—15
South-west monsoon	32·35	37·95	—5·60	—15
Retreating south-west monsoon	2·35	1·80	+0·55	+31
Whole year	41·05	45·32	—4·27	—9

The rainfall was practically normal in amount (*i.e.*, the variation from the normal was less than 10 per cent.) in 23 out of the 51 rainfall districts (omitting Burma) into which India is divided :—

Division.	Rainfall.			
	Average actual of year 1901.	Average normal of year.	Variation of actual from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Eastern Bengal	94·21	89·24	+4·97	+6
Assam Brahmaputra	82·16	89·88	−7·72	−9
Deltaic Bengal	63·27	60·56	+2·71	+4
Central Do	51·02	56·13	−5·11	−9
Chota Nagpur	50·45	53·59	−3·14	−6
United Provinces, East	36·20	38·25	−2·05	−5
„ „ Central	31·13	34·31	−3·18	−9
„ „ West submontane	45·65	46·37	−0·72	−2
„ „ Hills	65·33	61·05	+4·28	+7
Punjab Submontane	29·53	30·73	−1·20	−4
Do. and North-West Frontier Province Hills.	62·36	62·54	−0·18	0
Malabar	134·18	125·52	+8·66	+7
Madras South Central	32·22	29·56	+2·66	+9
Konkan	105·36	115·08	−9·72	−8
Bombay Deccan	33·79	36·59	−2·80	−8
Hyderabad, North	35·26	36·86	−1·60	−4
Central Provinces West	41·77	44·67	−2·90	−6
„ „ Central	55·42	51·63	+3·79	+7
„ „ East	50·90	50·08	+0·82	+2
Madras East Coast North	40·21	42·01	−1·80	−4
Hyderabad South	27·70	29·96	−2·26	−8
Madras Central	22·53	24·82	−2·29	−9
„ East Coast South	43·67	41·58	+2·09	+5

The rainfall was in excess by 10 per cent. or over in the rainfall districts for which data are given below :—

Division.	Rainfall.			
	Average actual of year 1901.	Average normal of year.	Variation of actual from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
North Punjab	25·40	21·81	+3·59	+16
Mysore	37·83	34·47	+3·36	+10
Madras East Coast, Central.	36·61	33·18	+3·43	+10
Madras South	31·52	28·57	+2·95	+10

The rainfall of the year was between 10 and 25 per cent. in defect in 14 divisions, for which comparative data are given in the following table :—

Division.	Rainfall.			
	Average actual of year, 1901.	Average normal of year.	Variation of actual from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Assam Surma	116·71	134·07	−17·36	−13
„ Hills	116·38	135·41	−19·03	−14
North Bengal	79·67	96·92	−17·25	−18
Bengal Hills	98·53	131·88	−33·35	−25
Orissa	52·50	59·08	−6·58	−11
South Bihar	35·30	43·74	−8·44	−19
South Oudh	32·35	36·10	−3·75	−10
North Oudh	30·97	38·95	−7·98	−20
United Provinces East Submontane.	35·56	42·70	−7·14	−17
Central Punjab	15·64	18·87	−3·23	−1
West Punjab	7·60	8·93	−1·33	—
Khandesh	25·90	32·77	−6·87	—
Berar	36·02	40·56	−4·54	−1
Central India East	33·80	42·51	−8·71	−20

The rainfall of the year was more than 25 per cent. below the normal in the following divisions :—

Division.	Rainfall.			
	Average actual of year, 1901.	Average normal of year.	Variation of actual from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
North Bihar	37·57	53·27	−15·70	−29
United Provinces West	19·34	26·33	−6·99	−27
South East Punjab	16·01	23·51	−7·50	−32
South Punjab	10·90	16·02	−5·12	−32
Gujarat	25·71	44·03	−18·32	−42
Kathiawar and Cutch	12·62	28·19	−15·57	−55
Sind	2·23	6·00	−3·77	−63
Baluchistan Hills	5·90	9·57	−3·67	−38
Rajputana East and Central India West.	17·51	28·20	−10·69	−38
West Rajputana	6·57	12·58	−6·01	−48

The rainfall of the year was less than three inches in amount at thirty-one rain-gauge stations in North-Western India and Baluchistan.

The following gives data for these stations :—

Area.	Station.	Total annual rainfall.
		Inches.
Punjab	Alipur	1·32
	Shujabad	1·89
	Muridwala	2·00
	Sinánwan	2·12
	Mooltan	2·60
	Rájanpur	2·62
	Shorkot	2·63
	Muzaffargarh	2·78
	Dipalpur	2·94
Rajputana West	Jalor	1·07
	Chotan	1·99
	Dewa	2·13
	Balmer	2·52
	Ramgarh	2·75
Kathiawar	Dhrángadhra	2·98
Sind	Hála	1·07
	Sehwán	1·37
	Mehar	1·50
	Shahbandar	1·72
	Rohri	1·78
	Hyderabad	1·96
	Kurrachee	1·98
	Tatta	2·48
	Umarkot	2·64
	Jacobabad	2·68
	Jerruck	2·75
	Shikarpur	2·95
Baluchistan	Jhatput	2·06
	Nushki	2·38
	Chaman	2·74
	Temple Dera	2·87

Total rainfalls for the year exceeding two hundred inches were received at the following stations :—

Province.	Station.	Rainfall. Actual of year 1901.	Rainfall. Normal of year.
		Inches.	Inches.
Burma	Thayetchaung	205·70	?
	Yebyu	203·25	?
	Thaton	220·00	225·42
	Bilin	203·26	188·32
	Sandoway	223·44	212·60
	Ramree	205·04	178·23
	Akyab	206·14	193·56

Province.	Station.	Rainfall. Actual of year, 1901.	Rainfall. Normal of year.
		Inches.	Inches.
Bombay	Mátherán	212·65	212·89
	Malcolmpeth	266·41	267·94
	Lanoli	220·19	172·77
Madras	Peermade	244·48	189·80
	Karkala	206·35	187·57
Assam	Nemotha	218.93	202·35
	Lalakhal	247·16	264·84
	Sunamganj	231·37	209·68
	Cherra Poonji Police Station.	372·73	461·19

The following gives the heaviest falls in 24 hours exceeding 15 inches recorded during the year :—

Province.	District.	Station.	Date and month.	Rainfall during 24 hours preceding 8 A.M. of date.
				Inches.
Punjab	Simla	Barouli	21st August	16·48
Bengal	Bogra	Nowkhilla	8th September.	15·40
United Provinces of Agra and Oudh	Gonda	Torobganj	25th September.	16·85

The following gives a statement of the variation of the mean rainfall of India (excluding Burma) during the past 27 years :—

Year.	Number of divisions. Fall, excessive.	Fall, normal.	Fall, deficient.	Rainfall. Average actual.	Average normal.	Variation from normal.	Percentage variation.
				Inches.	Inches.	Inches.	
1875	16		8	43·47	41·09	+2·38	+6
1876	6		18	36·60	41·09	—4·49	—11
1877	10		14	36·81	41·09	—4·28	—10
1878	17	1	6	47·43	41·09	+6·34	+15
1879	16	2	6	42·78	41·09	+1·69	+4
1880	13	1	10	39·53	41·09	—1·56	—4
1881	15		9	41·19	41·09	+0·10	0
1882	17	1	6	43·73	41·09	+2·64	+6
1883	11	1	12	40·97	41·09	—0·12	0
1884	12		10	42·82	41·09	+1·73	+4
1885	15		7	42·14	41·09	+1·05	+3
1886	14		8	44·11	41·09	+3·02	+7

Year.	Number of divisions.			Rainfall.			
	Fall, excessive.	Fall, normal.	Fall, deficient.	Average actual.	Average normal.	Variation from normal.	Percentage variation.
				Inches.	Inches.	Inches.	
1887	11		11	43·51	41·09	+2·42	+6
1888	10		12	39·55	41·09	—1·54	—4
1889	15		8	43·50	41·09	+2·41	+6
1890	14	1	8	41·77	41·09	+0·68	+2
1891	6		17	37·55	41·09	—3·54	—9
1892	15		8	46·18	41·09	+5·09	+12
1893	22		1	50·16	41·09	+9·07	+22
1894	17		6	47·56	41·09	+6·47	+16
1895	5		17	38·90	41·09	—2·19	—7
1896	7	2	14	36·26	41·09	—4·83	—12
1897	10	2	11	40·94	41·09	—0·15	0
1898	10	3	10	41·52	41·09	+0·43	+1
1899	6		17	29·95	41·09	—11·14	—27
1900	10		13	40·52	41·09	—0·57	—1
1901	5		18	36·96	41·09	—4·13	—10

Concluding Summary.

I.—Cold weather period, January and February, 1901.—The following table gives mean variation data of the more important meteorological elements for the cold weather period, January and February 1901 :—

Meteorological Province.	Variation from normal during cold weather period, January and February.							
	Mean pressure.	Mean maximum temperature.	Mean minimum temperature.	Mean aqueous vapour pressure.	Mean humidity.	Mean cloud amount.	Total rainfall.	Percentage variation of rainfall.
	"	°	°	"			Inches	
Burma Coast and Bay Islands.	+·001	+0·7	+4·2	+·056	0	+0·4	+2·22	+252
Burma Inland. . .	+·026	−0·1	+2·0				+0·67	+167
Assam . . .	+·012	+0·4	+0·7				−0·70	− 29
Bengal and Orissa .	+·023	−1·5	+1·1	−·014	0	+1·0	+0·86	+ 62
Gangetic Plain and Chota Nagpur.	+·029	−4·7	+1·8	+·054	+11	+2·3	+2·92	+234
Upper Sub-Himalayas	+·030	−4·0	+0·9	+·021	+ 7	+0·4	+1·90	+ 67
Indus Valley and North-West Rajputana.	+·024	−2·7	−1·5	+·012	+ 4	−0·4	−0·22	− 23
East Rajputana, Central India and Gujarat.	+·021	−3·8	−0·5	−·013	+ 3	+0·2	+0·66	+143
Deccan . . .	+·009	−2·7	+1·4	+·016	+ 4	+1·5	+1·68	+343
West Coast. . .	+·005	−0·5	+1·5	−·033	− 4	+0·7	+0·60	+154
South India . .	+·001	+1·3	+3·9	+·081	+ 4	+1·6	+2·35	+313

The pressure variations were everywhere positive. They were slight in amount in South India and over the Burma Coast and the south of the Bay, and moderate over the West Coast and the Deccan and in Assam and considerable to large elsewhere. The excess was greatest in the Upper Sub-Himalayas, the Gangetic Plain and Chota Nagpur.

The mean maximum temperature of the period was in large defect over the areas where the excess of pressure was greatest, namely, the Gangetic Plain and Chota Nagpur, and the Upper Sub-Himalayas, where it equalled or exceeded 4°. But the defect was only slightly less (3°·8) in East Rajputana, Central India and Gujarat, and was moderate to considerable in the Deccan, the Indus Valley and North-West Rajputana, and Bengal and Orissa. In South India and on the Burma Coast the areas where the pressure was practically normal, the maximum temperature was in slight to moderate excess. Elsewhere the variations of the maximum temperature from the normal were slight. The mean minimum temperature of the period was in excess everywhere, except in the Indus Valley and North-West Rajputana, where it was in moderate, and in East Rajputana, Central India and Gujarat, where it was in slight, defect. The excess was greatest in South India and the Burma Coast and Bay Islands, where it ranged from 3°·9 to 4°·2. Elsewhere the variations were only moderate in amount. The mean temperature of the period was hence in moderate excess in South India and on the Burma Coast, and in moderate defect in the Indus Valley, Rajputana, Central India and Gujarat; in the Gangetic Plain and Chota Nagpur and the Upper Sub-Himalayas the defect was slight to moderate. The mean temperature of the period was in defect everywhere, except in Assam, Burma, South India and the West Coast. In Assam, Bengal and Orissa, the Deccan and on the West Coast, however, the variations were only slight.

The amount of aqueous vapour in the air was much greater than usual in South India, the Burma Coast and Bay Islands, the Gangetic Plain and Chota Nagpur, and in moderate defect on the West Coast. Elsewhere the variations from normal were small and of little importance. The humidity was in slight to moderate excess everywhere, except on the West Coast, where it was in slight defect. The excess was greatest in the Gangetic Plain and Chota Nagpur, where it was 11, and in the Upper-Sub Himalayas, where it was 7. In both areas the excessive humidity was partly due to excess of aqueous vapour and partly to lower temperature than usual. The period was cloudier than usual everywhere, except in the Indus Valley and North-West Rajputana, where the cloud amount was in slight defect. The excess was very marked in the area of excessive humidity, in the Gangetic Plain and Chota Nagpur and was also considerable over the Deccan and in South India.

The rainfall of the period was in large excess over the whole of the Empire, except Assam, the Indus Valley and North-West Rajputana, where, however, it was in only slight to moderate defect. It was unusually heavy over the Deccan and in South India, where it was more than four times the normal amount. It was from three to three-and-a-half times as heavy as usual on the Burma coast and in the Gangetic Plain and Chota Nagpur, and about two-and-a-half times as heavy as usual in the interior of Burma, in East Rajputana, Central India and Gujarat and on the West Coast. Elsewhere the variations from normal were comparatively unimportant.

The chief features of the cold weather period were, therefore, the unusually high pressures and low temperatures which prevailed in Upper India and the unusually widespread and heavy rainfall, especially over the Deccan and the south of the Peninsula and in Burma, the last, a feature which is to be associated with the eastward passage of a series of storms along a much more southerly track than usual. They originated for the most part off the North Bombay coast, or in the Gulf of Cambay, and moved eastwards over the head of the Peninsula and in some cases passed into the Bay of Bengal and affected the weather over Burma.

A reference to the monthly weather summaries for the year 1901 will show that there was a considerable resemblance between the cold weather period of that year and those of the years 1893 and 1894, especially the former. These periods were marked by a considerable deficiency of temperature and by increased humidity, cloud and rainfall in North-Western India. The following gives com-

parative data for the cold weather periods of the years 1892 to 1901 for the area, including the Punjab, Rajputana, the United Provinces and Bihar :—

Cold weather period of	Variation from normal in North-Western India and Bihar of			
	Temperature.	Humidity.	Cloud.	Rainfall.
	°			Inches.
1901	—1·5	+ 6	+0·5	+ 1·38
1900	+0·7	— 4	+0·7	+0·59
1899	—0·5	— 6	—0·9	—0·51
1898	+1·1	— 1	—1·0	+1·22
1897	+1·2	— 2	—0·4	—0·12
1896	+2·0	— 3	—0·5	—0·72
1895	+0·8	+ 5	—0·2	+0·43
1894	+0·6	+10	+1·3	+0·92
1893	—4·2	+11	+1·4	+2·04
1892	+2·5	— 2	—0·2	—0·37

The variations of the temperature and humidity conditions in the cold weather of 1900-1901 were determined by the distribution of rainfall during the period and hence by the distribution and character of the cold weather storms of December, 1900, and January and February, 1901.

The chief characteristics of the storms of that period were as follows :—

(1) The number of depressions and cold weather disturbances was larger than usual both in January and February. Seven appeared in January and seven in February.

(2) The disturbances were (with the exception of one storm in January and one in February) feeble and ill-defined and did not give rise to deep secondary depressions in the Punjab.

(3) The precipitation accompanying these disturbances in the Himalayan areas fell as snow to lower levels than usual.

(4) The precipitation accompanying the disturbances was much more general than usual over the whole country, North Bombay being the only area where the precipitation was light.

The chief features of the cold weather storms of 1900-1901 were fairly persistent throughout the greater part of the season. An examination of the pressure and other conditions in India and neighbouring parts of the monsoon area seems to indicate that they were mainly related to the prevalence of unusually high pressures over the Persian region and particularly in the west and north-west of the Arabian Sea, pressure being at the same time about normal or in slight defect in the east of the Arabian Sea and on the North Bombay coast. Winds were consequently more northerly than usual in the centre and north-east of the Arabian Sea, and more southerly than usual on the Konkan Coast and over the Deccan. There was thus a tendency of the establishment of an irregularly cyclonic circulation off the North Bombay coast and in the neighbourhood of the Gulf of Cambay, which under favourable circumstances developed into a depression with an irregular cyclonic circulation round it. In this way originated three of the seven depressions in January and two of the seven depressions in February.

It may be noted that, as far as can be judged from the available data, pressure was abnormally high throughout the cold weather period, and especially in February, not only in North India and Persia, but also in Trans-Caspia and in the Caspian region, as indicated by the data for Baku and Tashkent given below :—

Station.	Variation from normal of the mean pressure for		
	January.	February.	Mean of period.
	"	"	"
Baku	+·028	+·116	+·072
Tashkent	+·112	+·272	+·192

The following table gives vertical pressure anomalies for the cold weather period of 1900-1901 :—

Pair of Stations.	Vertical pressure anomaly.						
	September, 1900.	October, 1900.	November, 1900.	December, 1900.	January, 1901.	February, 1901.	Mean of period November, 1900, to February, 901.
	"	"	"	"	"	"	"
Leh and Lahore	—·014	—·018	+·065	—·034	—·068	+·013	—·006
Quetta and Jacobabad	+·011	—·011	+·032	—·039	—·024	+·001	—·008
Murree and Peshawar	+·013	—·004	+·048	—·001	—·017	+·006	+·009
Simla and Ludhiana	+·018?	+·013?	+·035	—·019	—·053	—·033	—·018
Chakrata and Roorkee	0	+·002	+·039	+·001	—·042	—·025	—·007
Ranikhet and Bareilly	+·001	+·005	+·038	+·019	—·026	—·002	+·007
Darjeeling and Dhubri	—·023	+·012	+·022	+·020	—·008	+·033	+·017
Mount Abu and Deesa	—·019	—·024	—·005	—·019	—·040	—·041	—·026
Pachmarhi and Hoshangabad	—·022	—·025	—·011	—·003	?	?	?
Wellington and Coimbatore	—·004	—·006	—·013	—·006	+·012	+·009	+·001

The following table gives the mean vertical pressure anomalies for the cold weather periods, November to

February of the present year, as well as of the previous eight years for comparison :—

Pair of Stations.	Vertical pressure anomaly.								
	1900-1901.	1899-1900.	1898-1899.	1897-1898.	1896-1897.	1895-1896.	1894-1895.	1893-1894.	1892-1893.
	"	"	"	"	"	"	"	"	"
Leh and Lahore.	—·006	+·008	+·038	+·040	+·013	+·041	+·009	—·004	—·046
Quetta and Jacobabad.	—·008	+·019	+·027	+·050	—·007	+·019	+·001	+·006	—·007
Murree and Peshawar.	+·009	+·040	—·012?	+·041	+·006	+·022	—·006	?	—·034
Simla and Ludhiana.	—·018	+·012	+·005	+·019	—·003	+·012	—·017	—·015	—·049
Chakrata and Roorkee.	—·007	+·022	+·019	+·028	+·023	+·030	+·010	—·010	—·022
Ranikhet and Bareilly.	+·007	+·023	+·011	+·018	+·021	+·025	+·003	+·011	+·013
Darjeeling and Dhubri.	+·017	+·004	—·010	?	+·004	+·007	+·001	+·017	—·008
Mount Abu and Deesa.	—·026	—·008	—·006	—·002	—·008	+·005	—·007	+·003	?
Pachmarhi and Hoshangabad.	?	—·005	—·015	—·017	+·013	?	+·013	?	+·005

The above shows that the character of the vertical pressure anomalies changed very considerably in the course of the cold weather period of 1900-1901. They were large and positive in November, but by December had changed to negative at four out of the seven pairs of stations in Northern India, the negative anomalies being moderate to large at the stations in the extreme north and west of the Punjab. The diminution between November and December of the vertical pressure anomalies in North-East India was very slight, but in January the diminution was very marked everywhere, except in Baluchistan. In January the vertical pressure anomalies were negative everywhere, except in South India, the negative values being large at the stations in the north and east of the Punjab, as well as at Mount Abu. In February there was a general recovery, which was most marked at the Leh and Lahore pair of stations, and, in consequence, the anomalies were positive, although slight, at all the Himalayan pairs of stations, except Simla, Chakrata and Ranikhet, where they were still negative, but only slight to moderate in amount.

On the mean of the period, November 1900 to February 1901, these large changes in the values of the anomalies practically counterbalanced each other, with the result that the vertical pressure anomalies were everywhere slight in amount, the greatest negative variations being —·026″ at Mount Abu and —·018″ at Simla, and the greatest positive +·017″at Darjeeling. The variations in the vertical anomalies from month to month during the cold weather period of 1900-1901, however, make it difficult to compare the conditions obtaining then with those of other years. In the year 1892-1893, which closely resembled 1900-1901, the vertical pressure anomalies showed, on the mean of the period, moderate to large negative values at the stations in the north and north-east of the Punjab. An examination of the data, however, shows that the low temperatures and excessive rainfall and humidity in 1893 were mainly due to the advance of an unusually large number of moderately severe storms of the ordinary cold weather type, which originated for the most part in the Persian region and pursued the normal track of such storms, giving very general precipitation over the whole of Upper India. In 1900-1901, on the other hand, the storms were for the most part feeble and, although the accompanying precipitation was general and copious, this was probably due to the fact that in the unusually southerly track of the storms the cyclonic circulation drew in damp winds from the adjacent sea areas and carried over the central parts of the country winds much more fully charged with moisture than usual.

An examination of the Indian monsoon area charts and of the charts issued by the Russian Meteorological Office indicates the general conditions obtaining in the areas to the west and north-west of India during the inception of the storms of the period.

The following gives a list of the more important cold weather storms of 1900-1901 and of the conditions obtaining in South-East and South Europe during their formation :—

Date and character of storm.	Area of formation.	Weather conditions in East South-East, and South Europe prior to and during the formation of the storm, and in the case of locally formed storms in India.
Feeble cold weather storm of the 1st January in Arabia and Persia, 2nd in Baluchistan and 3rd and 4th in Northern India.	North-East Arabia .	A depression was moving in a south-easterly direction over the centre of the Mediterranean and pressure had fallen rapidly in South-East Europe and in Asia Minor.
Feeble cold weather storm of the 31st December to the 5th January.	North-east of the Arabian Sea and the Gulf of Cambay.	Pressure was relatively high in the west of the Arabian Sea and relatively low off the North Bombay Coast.
Feeble cold weather storm of the 6th to the 9th January.	Ditto .	Ditto.
Cold weather storm of the 9th to the 11th January in Persia, the 12th in Baluchistan and the 13th and 14th in Northern India.	North Arabia and South-West Persia.	High pressure conditions obtained over the greater part of Europe, but pressure was about normal in South-East Europe.
Feeble cold weather storm of the 16th to the 19th January.	North-east of the Arabian Sea and the Gulf of Cambay.	Pressure was relatively high in the west of the Arabian Sea and relatively low in the north-east of the Arabian Sea and in the Gulf of Cambay.
Feeble cold weather storm of the 15th to the 18th in Persia and Baluchistan and the 19th to the 21st in Northern India.	North Arabia and South-West Persia.	Probably originated during a period of falling pressure in Transcaspia due to the southward movement of a low pressure area over the east of Europe.
Feeble cold weather storm of the 21th to the 26th January in Baluchistan and Sind.	Probably Baluchistan Plateau or Upper Sind.	Pressure had been falling rapidly during the 22nd, 23rd and 24th in East Russia and West Siberia, in consequence of the south-eastward movement of a deep depression from Scandinavia to the south-east of Russia in Europe. On the 23rd pressure was very uniform to the west and north-west of India, where on the 24th, with the continued fall of pressure, the feeble depression seems to have developed.

Date and character of storm.	Area of formation.	Weather conditions in East, South-East, and South Europe prior to and during the formation of the storm, and in the case of locally formed storms in India.
Cold weather storm of the 1st to the 8th February, in Gujarat, and Central and Northern India.	North-east of the Arabian Sea off the North Bombay coast.	Pressure was relatively high in the west of the Arabian Sea and relatively low off the North Bombay coast.
Cold weather storm of the 8th to the 16th February.	Ditto .	Ditto.
Feeble cold weather depression of the 11th and 12th February in North-West India.	Sind and the South-West Punjab.	It originated during a period of falling pressure in North-West India and in the regions to the west and north-west of India.
Cold weather storm of the 15th to the 20th February, in the Peninsula and Northern India.	Bombay Deccan . .	
Feeble cold weather depression of the 20th and 21st February in Sind and the South-West Punjab.	Sind and the Baluchistan Plateau.	Pressure was very uniform in that area on the 19th.
Cold weather storm of the 22nd February in North-Western India.	Ditto .	This depression was probably the local result of a large and very extensive downward movement of pressure most marked in West Siberia, where the fall exceeded three quarters of an inch.
Feeble cold weather depression of the 27th and 28th February.	Ditto .	A depression which appeared in the Western Mediterranean on the 24th passed eastwards during the following day, being central over the south of Greece on the 25th and to the north of the Caucasus on the 26th. It thereafter seems to have passed in a south-easterly direction into Transcaspia, and to have been the main factor in causing the very rapid fall of pressure (about a quarter of an inch) in that area on the 27th. There are no data to show that the depression passed into India, or even entered Afghanistan, but it is very probable that the rapid fall of pressure in India on that date was a far off result of the advance of the storm. The changes in India only resulted in reducing the pressure to normal, pressure having previously been in very large excess, and no definite or well-marked depression developed in the Indian region.

The preceding data indicate that the cold weather storms of 1900-1901 were unusually numerous, but, on the whole, feebler than usual. None of them seem to have been the direct continuation of storms in Europe or Central Asia, but the development of a large number, if not all, of those which originated in the land areas to the west of India seems to have been to some extent conditioned by actions taking place in South-East Europe or Transcaspia. A comparison of the data given in the Russian charts with the data for Baghdad shows an almost complete agreement in the daily variations of pressure in the Black and Caspian Sea regions and the variations at Baghdad, and also a general agreement between the actual values of the pressure in the two regions. An examination of the data shows that the depressions which advanced eastwards from the Arabian or Persian areas to India originated in almost every case during periods of low pressure in South-East Europe. The chief exception was the storm of the 9th to the 11th January in Arabia and Persia which showed in India on the 13th and 14th January. But even in this case there are some reasons for supposing that the fall was related to the southward movement of a low pressure area from the Ural region to Transcaspia. In nearly every case the storms which advanced eastwards from the land areas in the west were feeble, little more than mere waves of low pressure which could be only faintly traced in the charts, but which generally developed somewhat on entering the Indian region, in one or two cases giving rise to well-marked depressions in the Punjab. A remarkable feature of the pressure conditions of the period was the extremely high pressures which prevailed not only over India, but in the Central Asian region, a feature which was especially marked in February. It is possible that with this is to be associated the unusually feeble character of the storms of the period.

A second feature of the depressions of the period, which may be noted here, was the origin of a large number of the storms in the Gulf of Cambay and the part of the Arabian Sea off the North Bombay coast. An examination of the charts seems to indicate that the initiation of this class of storms was conditioned by the prevalence of unusually high pressures over the centre and west of the Arabian Sea, with relatively low pressures in the region of the Gulf of Cambay, while at the same time pressure was relatively high over the centre of the Peninsula. With this distribution of pressure the isobars were much more tilted to the north than usual in the Arabian Sea, and on entering the the land area, cut sharply down in a south-easterly direction. Consequently, the winds in the centre of the Arabian Sea were much more northerly than usual, while in the centre of the Peninsula they were unusually southerly, and hence under favourable conditions, such as a general fall of pressure in Western India, an irregularly cyclonic whirl was originated off the North Bombay coast. It may be remarked that the abnormal features of the pressure distribution of the period favoured the development of this class of storms, three occurring in January and two in February. The tracks of these storms lay, generally, over the head of the Peninsula, *i.e.*, farther south than usual. They were thus able to draw in moist winds from the Bay more freely than storms following the normal course, and hence gave precipitation to regions which ordinarily lie outside the influence of cold weather storms. In consequence, the rainfall of the period was unusually widespread and general, the only area of deficient rainfall being the place of origin of the storms and the adjacent land areas, *i.e.*, North Bombay. The cool northerly winds, which followed in the rear of the storms, hence extended farther south than usual, and it is possible that to these is in part due the unusually cool weather which held over the head of the Peninsula and the Deccan during the period.

The following tables, givingthe available rainfall data for the Persian region and for the regions to the north and

west of India, show that in the year under discussion the rainfall was very light at the stations in Persia (except Jask) and at Kabul and Kashgar, but was in excess in Baluchistan and in Northern India. This confirms what has been already indicated, namely, that the precipitation within India was due to relatively local, and not to general, causes. In point of fact, the rainfall of the period in India was mainly conditioned by the movements of the storms which originated in North Bombay :—

Station or Province.	RAINFALL OF PERIOD, DECEMBER TO FEBRUARY. Variation from normal in								
	Normal of period.	1891-92.	1895-96.	1896-97.	1897-98.	1898-99.	1899-1900.	1900-1901.	1901-1902.
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
Baghdad	6·03		+0·51	—2·78	—2·10	—4·50	—3·28	—4·10	—4·42
Teheran	3·49		—0·68	+0·98	—1·03	—0·58	—0·36	—2·03	—0·18
Ispahan	0·60		—0·15	+0·08	+1·07	+0·09	+0·71	—0·55	+0·37
Bushire	9·61	—5·89	—6·33	—3·49	—0·86	—4·30	+2·84	—2·53	—6·14
Jask	2·47		—1·34	—0·80	—2·36	—1·97	+3·54	+0·93	—1·95
Quetta	5·05	—3·21	+0·34	—0·77	—2·30	—2·61	+0·20	+1·38	—4·94
Kashgar	0·69		—0·74	—0·20	—0·82	—0·82	+0·22	—0·59	—0·55
Kalat	5·11		...	—2·30	—3·37	—2·93	—2·70	+2·50	2·68
Chaman	4·63		—2·26	—0·05	—3·03	—1·39	+1·54	+1·21	—3·64
Kabul	1·85		—1·85	+4·95	—1·47	—1·85	—2·10	—1·80	—1·79
Punjab	2·22	—1·47	—0·59	+0·17	+7·63	—0·83	—0·63	+2·02	—2·21
Rajputana	0·78		—0·38	—0·27	+0·24	—0·32	—0·68	+0·56	—0·56
Sind	0·82	—0·63	—0·53	—0·65	—0·20	—0·78	+1·06	+0·15	—0·60
United Provinces of Agra and Oudh	1·52	—0·43	—1·05	+0·21	—1·26	—0·26	—0·79	+3·39	—1·22

Station.	RAINFALL OF PERIOD, OCTOBER TO MARCH. Variation from normal in								
	Normal of period.	1891-92.	1895-96.	1896-97.	1897-98.	1898-99.	1899-1900.	1900-1901.	1901-1902.
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
Baghdad	9·03		+2·61	5·03	—3·18	—6·25	—4·07	—5·08	—5·27
Teheran	7·73		—0·52	+0·99	—0·67	—3·33	—2·73	—3·01	—0·79
Ispahan	3·27	—4·56	+0·85	+1·73	—0·26	—1·65	—0·24	—0·80	—0·10
Bushire	13·30		—7·67	+4·49	—5·30	—4·76	+0·91	—2·60	—9·68
Jask	4·38	—4.15	—0·73	+2·11	—1·91	—2·96	+2·43	+0·20	—3·58
Quetta	7·09		+1·74	+0·45	—0·76	—2·49	—0·66	+2·16	—6·58
Kashgar	1·05		—0·61	+0·50	?	—1·18	+0·06	—0·95	—0·86
Kalat	7·08		?	+3·08	—3·07	—4·67	—3·40	+2·76	—3·79
Chaman	6·59		—2·39	+0·03	—2·96	—2·17	+0·18	+1·49	—5·35
Kabul	8·73		+2·27	+2·60	—4·30	—4·58	—3·63	—3·45	—5·31

The character of the rainfall during the cold weather of 1901—1902, for which data are also given in the table, appears to indicate that the conditions giving abnormally light rainfall in Southern Asia during the past seven years still persist, and that the abundant rainfall in India during 1900-1901 was not an indication of the disappearance of the unfavourable conditions.

II.—Hot weather period, March to May, 1901. —The following table gives the mean variations of the more important meteorological elements in the eleven meteorological provinces of India for the hot weather period, March to May, 1901 :—

Meteorological Province.	Variation from normal during hot weather period, March to May, 1901.							
	Mean pressure.	Mean maximum temperature.	Mean minimum temperature.	Mean aqueous vapour pressure.	Mean humidity.	Mean cloud amount.	Total rainfall.	Percentage variation of rainfall.
	"	°	°	"			Inches	
Burma Coast and Bay Islands.	—·002	+0·1	+1·8	+·006	—2	—0·1	—0·29	—2
Burma, Inland	+·026	+0·7	+0·7				+3·60	+54
Assam	+·017	+1·8	—0·7				—12·17	—42
Bengal and Orissa	+·020	+1·5	—0·4	—·034	—5	—0·1	—3·51	—31
Gangetic Plain and Chota Nagpur.	+·022	—0·7	—0·5	—·004	0	+0·2	+0·16	+6
Upper Sub-Himalayas.	+·026	—1·6	—0·6	—·004	+1	—0·3	+0·15	+6
Indus Valley and North-West Rajputana.	+·018	+0·9	+0·5	—·001	—2	—0·2	+1·12	+87
East Rajputana, Central India and Gujarat.	+·015	+0·4	+0·9	—·049	—4	—0·1	—0·13	—20
Deccan	+·021	—1·0	+0·9	+·036	+4	+0·9	+1·14	+59
West Coast	+·006	+0·9	+0·9	—·003	—3	—0·2	—0·24	—3
South India	+·018	—0·5	+0·5	+·003	0	+1·0	—0·73	—17

The above table indicates that, on the average of the period, pressure was in slight to moderate excess, except in the Burma Coast area and Bay Islands, where it was in very slight defect; temperature, in slight to moderate excess, except in the Gangetic Plain and Chota Nagpur and the Upper Sub-Himalayas, where it was in moderate defect; the amount of aqueous vapour, the humidity and the cloud in general defect, except in the Deccan, where they were in moderate excess; while the variations of rainfall were irregular, the precipitation being in large excess in Burma Inland, the Deccan, the Indus Valley and North-West Rajputana, in moderate defect in Assam, Bengal and Orissa, and about normal elsewhere.

The mean 8 A.M. pressure of the Indian land area was ·045″ in excess in March, ·004″ in defect in April, and ·012″ in excess in May, and hence averaged ·018″ in excess for the whole of the hot weather period. With the abnormally high pressures which held during March were probably to be associated the unusual feebleness of the storms or depressions of the month, and the light rainfall over parts of Upper India. It may be noted that at Tashkent pressure was, on the mean of the month of March, about ·200″ in excess, which would seem to indicate that the high pressures which were a feature of the distribution in India were still more marked in Central Asia.

In April pressure fell below normal, but rose again to slight excess in May, and hence the excess of pressure which showed in the mean of the period was due almost entirely to the very large excess which held in March. The chief features of the period were (1) a storm of

unusual character which gave showers in the North Punjab and heavy snow to Chitral and the districts to the north of India at the end of the second week of April, and was followed by an intense cool wave, (2) a cyclonic storm which formed in the south-east of the Arabian Sea in the last week of April and afterwards marched in a north-westerly direction to near the mouth of the Persian Gulf, where re-curving it passed in a north-easterly direction over the the Mekran Coast and thence through Baluchistan to the Punjab; the storm gave moderate rain to the west of the Peninsula in the earlier stages of its course and heavy rain in the north and north-east of the Punjab and severe snowstorms in North Kashmir and Chitral in the last stages of its existence in the first week of May, after which a cool wave of unusual intensity spread over Northern India giving temperatures from 5° to 20° below normal in Baluchistan and the North Punjab.

The variations of the mean temperature conditions of the month of May were generally small and of little importance. The hot weather conditions of May gave rise to the following abnormal features of the pressure distribution in that month:—

(1) General to very slight excess of pressure, relatively to the mean condition, over the Peninsula, most marked on the Konkan Coast.

(2) Slight to moderate local defect of pressure in Kathiawar, Upper Sind and the south-west of the Punjab, the east of the Gangetic Plain and in Lower Burma.

(3) Slight to moderate excess of pressure at the level of the hill stations, as compared with the neighbouring plains.

The following table gives comparative data of the month of May for 1901, and also for fourteen years which were in the great majority of cases characterized by increased temperature and decreased pressure over the Indian area:—

Month and Year.	Variation from normal of		
	Mean pressure of month (mean of 10 and 16 hours).	Mean temperature of month.	Mean aqueous vapour pressure of month.
	"	°	"
May 1879	—·045	+1·3	—·010
„ 1880	—·022	+0·2	—0 1
„ 1881	+·002	+0·1	0
„ 1882	+·006	−0·2	—·004
„ 1885	+·062	—2·1	—·022
„ 1890	—·022	+0·6	—·011
„ 1892	—·027	+1·8	—·002
„ 1894	—·023	+1·5	—·011
„ 1895	—·007	+2·4	+·027
„ 1896	+·013	+2·3	—·005
„ 1897	—·004	+1·7	—·001
„ 1898	—·008	+0·6	—·015
„ 1899	—·019	+0·8	+·033
„ 1900	+·056	+0·8	—·014
„ 1901	+·009	+0·3	+·002

The preceding data show that increased temperature in May generally accompanies decreased pressure. The relation is not simple or direct, as there is no fixed relation between the two variations. In May, 1901, both temperature and pressure were in slight excess.

The following gives mean temperature variation data of Northern India (including the Punjab, Upper Sind, the United Provinces, Bihar and Rajputana) for the month of May of fifteen years resembling May, 1901, in their more important features:—

Month and Year.	Variation of mean temperature in Northern India.	Area of greatest variation.	Amount of greatest variation.
	°		°
May 1878	—4·2	North Bihar	+0·3
„ 1879	+4·0	United Provinces of Agra and Oudh.	+5·0
„ 1880	+2·0	South Punjab	+5·6
„ 1881	+0·8	Do.	+2·9
„ 1882	—0·5	North Punjab	+2·1
„ 1885	—4·6	Bihar	+1·0
„ 1890	+1·5	Punjab	+2·5
„ 1892	+3·0	West Punjab	+5·5
„ 1894	+3 0	Chota Nagpur	+5·0
„ 1895	+4·0	Punjab	+6·0
„ 1896	+3·1	Do.	+4·8
„ 1897	+3·6	North-West Rajputana	+5·5
„ 1898	+0·8	Assam (Surma)	+3·6
„ 1899	+3·3	Punjab (Central)	+6·3
„ 1900	+0·3	Do.	+2·5
„ 1901	+0·7	United Provinces, Central	+2·8

The data of the preceding table show that the temperature conditions in North-Western India of May, 1881, 1882, 1890, 1898, 1900 and 1901 were practically normal. In each of the months of May, 1879, 1880, 1892, 1894, 1895, 1896, 1897 and 1899 temperature was considerably above the normal, due largely, if not solely, to deficient precipitation in the cold weather period over the plains and adjacent mountain areas of Northern India. In each of these months, except that of May, 1896, the mean pressure of the Indian area was in defect, the deficiency averaging ·025" for the first five years, and almost identical in amount with this in four out of these five years.

Excessive temperature in the month of May generally gives rise to a larger diminution of pressure over the Indian area than that normal to the month, and hence to a deficiency of pressure as compared with the normal. The decrease of pressure is chiefly, if not solely, a temperature effect. This is confirmed by the fact that in each of these months (*viz.*, May, 1879, 1880, 1890, 1892, 1894, 1895,

1896, 1897 and 1899) pressure at the level of the hill stations was in large relative excess, or the vertical pressure anomalies were positive and considerable to large in amount. On the other hand, in years when the temperature variation is small, as in 1898, the vertical anomalies are small, and also frequently somewhat irregular at the hill stations in Northern India. This is established by the following data for six pairs of stations :—

Pair of Stations.	Vertical pressure anomaly in May.											
	1878.	1879.	1880.	1890.	1892.	1894.	1895.	1896.	1897.	1898.	1899.	1901.
	"	"	"	"	"	"	"	"	"	"	"	"
Quetta and Jacobabad	?	?	?	+·006	+·050	+·037	+·063	+·046	+·050	+·012	+·043	+·036
Leh and Lahore	—·052	?	+·069	+·063	+·125	+·082	+·101	+·085	?	+·003	+·075	+·003
Murree and Rawalpindi	+·011	+·040	+·038	+·041	+·035	+·028	+·057	?	+·017	+·001	+·033	+·006
Simla and Ludhiana	—·025	?	?	+·033	+·049	+·042	+·060	+·050	+·054	+·009	+·047	+·020
Chakrata and Roorkee	—·052	+·044	+·015	+·022	+·040	+·035	+·045	+·038	+·058	+·025	+·045	+·020
Darjeeling and Calcutta	—·039	+·032	+·007	+·002	+·003	+·023	+·033	+·011	+·028	+·015	—·005	+·021
Mean	—·031	+·039	+·032	+·028	+·050	+·041	+·060	+·046	+·041	+·011	+·040	+·018

These conditions in May 1901 accompanied unusually late and somewhat heavy snowfall in April and May. Similar years of late and heavy snowfall are 1898, 1885 and 1878. The following gives the variations of the mean pressure of the Indian area from the normal during the first five months of these years and of 1901 for comparison :—

Year.	Variation of mean pressure of the Indian area from the normal in				
	January.	February.	March.	April.	May.
	"	"	"	"	"
1878	+·030	+·033	+·044	+·037	+·082
1885	+·039	—·013	+·022	+·018	+·068
1898	+·017	—·077	—·013	—·017	—·009
1901	+·011	+·020	+·045	—·004	+·012

The years 1878 and 1885 were characterized by excessive as well as prolonged snowfall and were associated with a considerable to large excess of pressure throughout.

In the years 1898 and 1901 the snowfall was moderate in the early part of the winter, and, although larger than usual in April and May, it was not excessive, as in 1878 and 1885. This is shown very clearly by the temperature variations of the Punjab and United Provinces for the months of April and May :—

Year.	Punjab.		United Provinces of Agra and Oudh.	
	April.	May.	April.	May.
	°	°	°	°
1878	—0·9	—4·3	—0·6	—4·6
1885	—3·1	—8·1	—1·0	—3·6
1898	+4·8	+0·2	+2·5	+0·7
1901	—2·7	—0·3	—1·7	+0·4

The statements of the snowfall in April and May received from district officers, show that the weather was unusually disturbed in April and the first fortnight of May, so that at the end of May the accumulation of snow probably exceeded the normal to a slight or moderate extent in Kashmir and Chitral and the areas to the north. But the snowfall melted rapidly during the hot weather of the last fortnight of May.

The more important features of the hot weather period were as follows :—

(1) Large excess of pressure in March, which, however, entirely disappeared in April and was replaced by a slight defect, while there was a slight recovery in May.

(2) Slightly higher temperatures than usual in March (except in Chota Nagpur and the eastern districts of the Peninsula), lower temperatures than usual in April in Northern India, and slightly excess temperatures in May, especially in Rajputana and Upper Sind, while temperature was in local defect in the North and Central Punjab.

(3) More frequent nor'westers and hailstorms than usual and the occurrence of a severe cyclonic storm in the south-east of the Arabian Sea in the fourth week of April and its subsequent advance by a curved path into the Punjab.

The following table gives vertical pressure anomalies for each month of the hot weather period of 1901 in Northern India, determined from the variation data of eight pairs of stations. It will be seen that the vertical pressure anomalies were positive in the extreme north-west of India in March, but generally negative elsewhere. In April they were generally negative, the chief exception being Quetta, where the vertical pressure anomaly was positive and moderate in amount. The chief change in this month was the large decrease in the extreme north and west of India, the changes at Quetta, Murree and Leh being —·025″, —·037″ and —·067″, respectively. In May there was a moderate to large increase at most pairs of stations, the greatest changes being +·030″, +·026″ and +·021″ at Leh, Chakrata and Simla, respectively. Consequently the vertical anomalies were in May positive at all stations

in the Himalayas, except Murree, where they were negative but very slight.

Pair of Stations.	Vertical pressure anomaly.			
	March.	April.	May.	Mean of period.
	"	"	"	"
Quetta and Jacobabad	+·049	+·024	+·036	+·036
Leh and Lahore	+·034	—·033	+·003	+·001
Murree and Peshawar	+·024	—·013	—·003	+·003
Simla and Ludhiana	—·008	—·001	+·020	+·004
Chakrata and Roorkee	—·025	—·006	+·020	—·004
Ranikhet and Bareilly	—·010	+·010	+·012	+·004
Darjeeling and Dhubri	+·005	+·016	+·032	+·018
Mount Abu and Deesa	0?	—·005	—·019	—·008?

The highest temperatures of the year were generally registered later than usual, in consequence of the protracted dry hot weather in June and the first half of July caused by the delay in the advance of the monsoon currents over North-Western India. The following gives the absolute maxima temperatures exceeding 115° registered in India during the hot weather of 1901 :—

Area.	Station.	Highest maximum temperature recorded during the year.	Date on which recorded.
		°	
Punjab	Mooltan	119·5	5th and 6th July.
	Montgomery	119·5	6th July.
	Sialkot	119·0	21st June.
	D. I. Khan	118·7	6th July.
	Khushab	118·4	6th July.
	Lahore	118·1	20th June, 5th and 6th July.
	Peshawar	117·0	6th July.
	Ludhiana	116·8	13th June.
	Sirsa	116·8	12th June and 5th July.
	Rawalpindi	116·0	6th July.
Sind	Jacobabad	126·0	6th July.
	Hyderabad	120·7	11th June.
	Kurrachee	116·4	25th May.
Rajputana	Pachpadra	121·0	11th June.
	Jodhpur	118·3	11th June.
	Kotah	117·1	31st May and 11th June.
	Deesa	117·1	11th June.
	Bikaner	116·9	5th July.
	Jaipur	116·2	5th July.

The meteorology of India during the hot weather of 1901 was determined in part by the distribution of the cold weather snowfall in the Himalayan area and in part by meteorological actions and conditions which gave abnormal and late snowfall over the greater part of the Western Himalayas during the month of April and the first half of May. The abnormal snowfall was heaviest in Chitral and North Kashmir.

The cold weather or winter snowfall was generally below the normal in the Western Himalayas and Afghanistan Mountains. The extent of the snow clad surface was less than usual at the beginning of the winter and was probably about normal at the end of March. The disturbances in April and May gave a moderate and late general fall of snow in the Western Himalayas, but the snow accumulation at the end of May was about the normal. The general character of the weather in Northern India in March was such as is invariably associated with deficient winter precipitation in the Western Himalayas, and the peculiar features of pressure and temperature in North-Western India in April and May were those associated with moderate late snow in the same region.

The larger features of the hot weather period were hence directly related to the snowfall of the previous cold weather season and to that of April and the first half of May in the North-Western Himalayas.

With the exception of the severe disturbance which affected the extreme north-west of the ceuntry during the first week of May, the weather was less disturbed than usual during the month. Thunderstorms were lighter and less frequent than usual in North-East India and the rainfall of the month was in places only about half the normal amount. The defect was particularly marked in Assam and Eastern Bengal, for which the following gives data :—

Area.	Rainfall.			
	Average actual, May, 1901.	Average normal, May.	Variation of actual from normal, May, 1901.	Percentage variation, May, 1901.
	"	"	"	
Eastern Bengal	5·71	10·36	—4·65	—45
Assam (Surma)	8·03	18·80	—10·77	—57
Assam (Hills)	8·19	15·15	—6·96	—46
Assam (Brahmaputra)	6.56	12·20	—5·64	—46

It may be noted that although pressure fell generally in the Indian region in April, it fell only slightly during April and May in the Central Asian region, as indicated by Tashkent. The following gives data for March, April and May for India and the Central Asian region :—

Area.	Variation from normal of mean pressure in			
	March.	April.	May.	Mean.
	"	"	"	"
India	+·045	—·004	+·012	+·018
Tashkent	+·200	+·184	+·156	+·180
Baku	+·124	+·144	+·056	+·108

III.—The south-west monsoon period, June to September 1901.—The meteorological conditions in the Indian land area antecedent to the establishment of the south-west monsoon were, on the whole, favourable to a normal monsoon and also to its rapid extension over India.

The following gives the most prominent and important of these antecedent conditions :—

(1) The snowfall up to the end of May was probably below the normal to a moderate extent in Persia, chiefly due to the early termination of the winter. In Baluchistan the snowfall was normal in amount and fell chiefly in November, December, January and February. In Afghanistan the precipitation was generally less than usual, while in Chitral it was probably below the normal in the earlier part of the winter, but was heavy in April and the first half of May. In Kashmir the chief feature was the heavy and late fall of the third week of April. In Chamba, Lahoul and the Simla hill states the winter commenced earlier than usual; moderately heavy snow fell in the

latter half of December, January and February and heavy and frequent snow in April. Consequently the accumulation at the end of May was probably greater than usual. In Kulu the accumulation was probably less than the average.

(2) In Kumaon and Garhwal the total fall of the season was above the normal to a moderate extent, while in the Assam Himalayas the fall was probably below the normal, the deficiency being most marked in Upper Assam and hence probably in the hills to the north of Upper Burma.

(3) Pressure was from January to March in increasing excess over the Indian area; it was about normal in April and in slight excess in May. Pressure was from December to April in slight excess in Northern and Central India and Upper Burma, as is the usual rule in periods of heavier cold and hot weather precipitation than usual, but was in slight defect in these areas in May.

(4) The pressure variations in the Peninsula, excluding Berar and the Central Provinces, were throughout the period generally opposite in character to those of Northern India, and were thus negative from December to April and positive in May.

(5) Pressure was generally in relative defect at the hill stations in the months of most disturbed weather in Upper India, *i.e.*, from December to February and in April, but was in relative excess in March and May, as is almost invariably the case in months of greater temperature than usual in the hot season.

(6) Temperature was in general defect in Extra-Tropical India in January and February, in general defect in March, except in North-Western India, where it was in slight to moderate excess. In April, on the other hand, it was in slight excess in North-Western India and in slight to moderate defect in North-Western and Central India. In May it was in general excess, the excess being most marked in Central and North-Western India.

(7) In Tropical India the variations of the temperature from the normal were generally opposite in character to those of Extra-Tropical India, being in excess from December to April, most marked in January and February, and, on the other hand, in slight defect in May.

(8) The air was damper than usual during the greater part of cold and hot weather periods over nearly the whole of the interior and more especially in North-Western India, Berar, the Central Provinces and the Deccan.

(9) The distribution of the precipitation during the cold and hot weather periods was abnormal. It was in more or less excess in the cold weather over the whole of India, with the exception of Assam, Baluchistan and Sind, the excess being very large in the Gangetic Plain, Chota Nagpur, Orissa, the Central Provinces, Berar and the Peninsula generally. It was in considerable to large defect in the hot weather period in North-East India, the United Provinces, Central India and Rajputana, but was, on the other hand, in slight to large excess in the Punjab and in moderate excess in Berar and Gujarat.

(10) The conditions in the Indian Seas and the Indian Ocean were, so far as can be ascertained, not unfavourable. Pressure was in May slightly lower than usual at the Seychelles, Zanzibar and Mauritius, but the winds were generally stronger than usual in the last fortnight of May. At the end of May the pressure conditions were about normal at all three stations in the Trades region, and the South-East Trades stronger than usual, so that the conditions seemed to be favourable for their early extension as south-west monsoon winds into the Arabian Sea. The only doubtful factor was the tendency of the humid currents to give excessive rain in East Africa, thus perhaps indicating an abnormal westerly determination of the monsoon currents.

The following is a summary of the forecast (prepared in the first week of June) of the probable strength of the monsoon currents and the distribution of the monsoon rainfall based on these conditions :—

(1) Judging from the conditions in India and the known conditions in the Indian Seas and Ocean, it is, on the whole, very probable the monsoon currents of the present year will be, as rain distributing currents, of at least normal strength on the average of the whole season and probable that they will be stronger than usual. It should, however, be noted that the heavy rainfall of the past two months in Central or Equatorial Africa points to the possible existence of conditions in that area unfavourable to a strong monsoon in India. So far as can be judged from the available information, the probability of this effect is very small. The average rainfall of the whole of India will probably be between 2 and 4 inches, or 5 and 10 per cent. in excess.

(2) It is probable there may be a slight delay in the establishment of the monsoon currents on the Bombay Coast. The delay will very probably be slight, and it is probable that the rains will set in fully on the Bombay Coast before the middle or end of the second week of June. The monsoon rains will probably begin about the normal date, in the third week of the month, on the Bengal Coast.

(3) The Bombay current is more likely to be above its normal strength than the Bay current.

(4) The local conditions were favourable, on the whole, in Burma, especially Lower Burma, Assam, Bengal, Bihar, Chota Nagpur, the United Provinces, especially the eastern districts, Central India, and these areas would probably receive at least normal rainfall.

(5) Conditions were less favourable in the Punjab, due chiefly to the excess of pressure in the northern districts, but they were, on the whole, favourable in Rajputana, more especially the eastern and central districts, the Central Provinces, Hyderabad (although less favourable there than in the Central Provinces), Berar, Khandesh, the West Coast, where the rainfall was likely to be practically normal.

(6) Conditions appeared to be more or less favourable in the Madras Deccan, Mysore and the Carnatic as well as in the North Madras Coast districts, and it was probable that in these areas the rainfall established about normal, except perhaps in the Carnatic, where it might be in slight defect.

The following table gives a summary of the rainfall data

of the south-west monsoon period, 1901, for comparison with the statements of the forecast :—

Province.	Rainfall of season, June to October.			
	Average actual, 1901.	Average, normal.	Variation of actual from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Burma	99·05	98·08	+0·97	+ 1
Assam	74·88	77·21	−2·33	− 3
Bengal	58·45	60·71	−2·26	− 4
Chota Nagpur	41·13	47·40	−6·27	−13
Bihar	30·34	43·59	−13·25	−30
United Provinces of Agra and Oudh.	28·39	34·70	−6·31	−18
Punjab	10·88	15·14	−4·26	−28
Central Provinces	43·44	45·83	−2·39	− 5
Central India	31·57	40·08	−8·51	−21
Rajputana	10 90	18·70	−7·80	−42
Berar	32·41	37·48	−5·07	−14
Bombay	32·11	41·44	−9·33	−23
Madras	30·69	34·06	−3·37	−10

The following table gives the mean variations of the more important meteorological elements in the eleven meteorological provinces of India for the south-west monsoon period, June to September, 1901 : —

Meteorological Province.	Variation from normal during south-west monsoon season, June to September.							
	Mean pressure.	Mean maximum temperature.	Mean minimum temperature.	Mean aqueous vapour pressure.	Mean humidity.	Mean cloud amount	Total rainfall.	Percentage variation of rainfall.
	"	°	°	"			Inches.	
Burma Coast and Bay Islands.	−·009	+0·5	+0·9	+·011	−1	+0·2	−1·31	− 1
Burma Island	0	+0·3	+0·5				−3·22	−10
Assam	−·006	−0·2	0				−5·47	− 8
Bengal and Orissa	−·011	+1·0	+0·5	+·009	−2	0	−2·51	− 5
Gangetic Plain and Chota Nagpur.	−·013	+2·6	+0·9	−·032	−7	−0·5	−7·20	−19
Upper Sub-Himalayas	−·012	+1·9	+0·8	−·054	−5	−1·1	−6·48	−21
Indus Valley and North-West Rajputana.	−·006	+2·1	+1·1	+·012	−2	−0·8	−3·68	−52
East Rajputana, Central India and Gujarat.	+·013	+3·7	+1·6	−·062	−10	−1·1	−14·35	−51
Deccan	+·012	+2·1	+0·8	−·001	− 2	−0·1	−4.57	−13
West Coast	+·007	+0·7	+0·8	−·001	− 2	−0·4	−1·44	− 2
South India	+·008	+1·3	+0·7	+·010	− 1	+0·6	−1·43	−10

The following is a statement of the chief features of the meteorology of the whole period :—

(1) Pressure was in slight excess on the mean of the whole period over the Peninsula, East Rajputana, Central India and Gujarat and in defect elsewere, except in Burma Inland, where it was normal. The excess was greatest in East Rajputana, Central India and Gujarat and the Deccan and the defect largest in the Upper Sub-Himalayas, Bengal, Orissa, the Gangetic Plain and Chota Nagpur.

(2) Temperature was in general excess, the day temperatures being more largely in excess than the night temperatures, the only area of deficient temperatures being Assam, where the day temperatures averaged 0°·2 below the normal. The excess was slightly marked in Burma, Bengal and on the West Coast, but was considerable in other parts of India, the day temperatures being especially high in the Gangetic Plain and Chota Nagpur +(2°·6), East Rajputana, Central India and Gujarat (+3°·7). The excess in the mean temperature exceeded 1° in the following divisions :—

East Rajputana, Central India and Gujarat (+2°·6), the Gangetic Plain and Chota Nagpur (+1°·7), the Indus Valley and North-West Rajputana (+1°·6), the Deccan (+1°·4), and the Upper Sub-Himalayas (+1°·3).

(3) The mean aqueous vapour pressure was in large defect in the Gangetic Plain and Chota Nagpur, the Upper Sub-Himalayas and East Rajputana, Central India and Gujarat, but in other parts of India the variations from normal were slight. The mean humidity was everywhere in defect, but the variations from normal were slight, except in the areas of deficient vapour pressure enumerated above, where they were considerable.

(4) The amount of cloud was, on the mean of the period, in slight defect everywhere, except in South India and on the Burma Coast, in both of which areas it was in slight excess. The defect was considerable only in the areas of deficient vapour pressure mentioned above.

(5) The rainfall, on the mean of the whole period, was everywhere in defect. The defect was large and exceeded 50 per cent. of the normal fall in the Indus Valley, Rajputana, Central India and Gujarat, while in the Upper Sub-Himalayas and the Gangetic Plain and Chota Nagpur the defect was about 20 per cent. of normal; elsewere the variations from normal were small and unimportant.

The chief features of the south-west monsoon period were the feebleness of the monsoon currents during June and the greater part of July, and their early retreat in September. During the last ten days of July and the whole of August they were of normal strength.

(1) The rainfall up to the end of July was, relatively to the normal, most largely in defect in Baluchistan, Sind, Rajputana, Kathiawar, Cutch, Gujarat and Central India. The following gives the data in illustration :—

Area.	Rainfall of period, June and July.			
	Average actual, 1901.	Average, normal.	Variation of actual from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Baluchistan	1·06	1·44	−0·38	−26
Sind	1·12	2·06	−0·94	−46
Rajputana	5·52	9·04	−3·52	−39
Kathiawar and Cutch	6·91	15·65	−8·74	−56
Gujarat	15·10	24 72	−9·62	−39
Central India	10·67	19·55	−8·88	−45

(2) The rainfall to the end of July was normal or in slight defect in Bengal, Assam, Burma and Bombay, as shown by the following data :—

Area.	Rainfall of period, June and July.			
	Average actual, 1901.	Average normal.	Variation of actual from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Bengal . . .	28·69	30·56	—1·87	— 6
Assam . . .	36·86	38·39	—1·53	— 4
Burma . . .	46·59	50·44	—3·85	— 8
Bombay . . .	19·21	23·03	—3·82	—17

(3) During August the total rainfall for the whole Indian region was approximately normal. It was in marked excess within a broad band stretching over the Central Provinces, Central India, the United Provinces and the Punjab hills. It was also in excess in Tenasserim and Arakan. The following gives data in illustration :—

Area.	Rainfall for August, 1901.			
	Average actual.	Average normal.	Variation of actual from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
United Provinces of Agra and Oudh.	12·57	10·57	+2·00	+19
Central India . .	17·24	11·98	+5·26	+44
Cenral Provinces . .	19·53	11·76	+7·77	+66
Punjab Hills . .	23·63	16·67	+6·96	+42
Arakan . . .	44·44	40·03	+4·41	+11
Tenasserim . . .	52·03	42·56	+9·47	+22

(4) The rainfall of August was in considerable defect in the Central and West Punjab, Baluchistan and in Madras. The following gives data in illustration :—

Area.	Rainfall for August, 1901.			
	Average actual.	Average normal.	Variation of actual from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Central Punjab . .	2·58	4·75	—2·17	—46
West „ . .	1·11	2·04	—0·93	—46
Sind	0·21	1·94	—1·73	—89
Buluchistan . . .	0·22	0·74	—0·52	—70
Madras . . .	5·41	6·52	—1·11	—17

(5) September was abnormally dry over the greater part of India due to the weakness of the currents and their early withdrawal from a large part of the country. The fall was less than half the normal amount in the areas for which the following gives data :—

Area.	Rainfall for September, 1901.			
	Average actual.	Average normal.	Variation of actual from normal.	Percentage variation from normal.
	Inches.	Inches.	Inches.	
Upper Sub-Himalays .	2·04	5·07	—3·03	—60
Indus Valley and North-West Rajputana.	0·17	0·89	—0·72	—81
East Raiputana, Central India and Gujarat.	0·85	4·92	—4·07	—83
West Coast . . .	3·80	9·30	—5·50	—59

The information at present available for discussing the meteorology of the South-East Trades region of the Indian Ocean is very limited.

The following gives variation data of the Royal Alfred Observatory, Mauritius, for nine months of the year deduced from a comparison of the means of 1901 with normal means based on the observations of the previous 25 years :—

Mauritius.

Month.	Variation from normal of pressure.	Variation from normal of rainfall.	Percentage variation of raintall.	Variation from normal of hourly wind velocity in m les.	Percentage variation of wind velocity.
	Inches.	Inches.			
January, 1901 . .	+·019	+11·26	+153	+3·0	+27
February „ . .	+·046	— 2·99	— 45	—3·9	—30
March „ . .	—·036	— 1·34	+ 16	—2·3	—23
April „ . .	—·033	— 1·86	— 35	—1·2	—11
May . „ . .	—·012	— 2·19	— 53	+1·6	+16
June . „ . .	—·009	— 0·04	— 2	0	0
July . „ . .	—·004	— 0·35	— 15	—0·5	— 4
August „ . .	—·001	— 0·03	— 1	—0·2	— 2
September „ . .	+·022	— 0·41	— 29	+0·2	+ 2

Pressure was in considerable defect in March and April, in slight defect in May and June, about normal in July and August and in moderate excess in September. The rainfall was in large excess in January and in slight excess in March, but during the other months of the period, January to September, the rainfall was in defect, the

defect being largest relatively to the normal in May and February, when about half the normal amounts were received. The total rainfall of the nine months was, however, in excess by 4·73 inches, or about 12 per cent. of the normal.

The wind strength was weaker than usual in February, March and April, but was above normal in May and practically normal throughout the whole of the monsoon period.

In the following table a similar comparison is given for Zanzibar, the normal means being deduced from the observations of nine years:—

Zanzibar.

Month.	Variation from normal of pressure.	Variation from normal of rainfall.	Percentage variation of rainfall.	Variation from normal of hourly wind velocity in miles.	Percentage variation of wind velocity.
	"	Inches.			
January, 1901 . .	+·037	−0·74	− 25	−1·3	−15
February „ . .	+·018	+7·76	+261	+1·2	+18
March „ . .	+·016	−0·48	− 9	−1·3	−23
April „ . .	−·007	+6·26	+ 53	+0·4	+ 6
May „ . .	−·009	+8·63	+ 98	+1·3	+16
June „ . .	+·036	+0·82	+ 66	−0·6	− 6
July „ . .	−·006	−0·49	− 23	−0·5	− 6
August „ . .	+·010	−0·63	− 34	+0·3	+ 4
September „ . .	+·045	+1·30	+ 83	−0·8	−14

The data indicate that the variations of the pressure from normal at Zanzibar were generally similar to the variations at Mauritius, namely, an excess of pressure in the earlier and later months of the period and a deficiency during the remainder of the period. At Zanzibar, however, the greatest excess of pressure showed in January instead of in February, as at Mauritius, while in March at Zanzibar pressure was in slight excess instead of in large defect, as at Mauritius in this month. At Zanzibar in June pressure was in moderate excess, but was in slight defect in April, May and July, while at Mauritius pressure was in slight to moderate defect from March to August.

The wind strength was practically normal from April to August, except in May, when it was in slight excess. It was below normal in September. The rainfall was in large excess on the mean of the period, the excess being very large in February and large in April, May, June and September. In the other months of the period it was in slight to moderate defect.

The following table gives the mean pressure differences between Mauritius and Zanzibar and Mauritius and the Seychelles (determined from the data of the seven years 1894—1900) and the actual differences in the corresponding months of the year 1901:—

Month.	Pressure difference. Mauritius *minus* Zanzibar.			Pressure difference. Mauritius *minus* Seychelles.		
	Mean of 1894 to 1900.	Mean of 1901.	Variation.	Mean of 1894 to 1900.	Mean of 1901.	Variation.
	"	"	"	"	"	"
January . . .	+·027	+·042	+·015	−·024	+·026	+·050
February . . .	−·006	+·066	+·072	−·004	+·048	+·052
March	+·045	+·018	−·027	+·052	+·018	+·034
April	+·053	+·053	0	+·106	+·145	+·039
May	+·060	+·060	0	+·162	+·162	0
June	+·050	+·032	−·018	+·210	+·181	−·029
July	+·090	+·089	−·001	+·235	+·245	+·010
August	+·110	+·093	−·017	+·243	+·241	−·002
September . . .	+·108	+·106	−·002	+·211	+·211	0
Mean of whole period .	+·060	+·062	+·002	+·132	+·142	+·009
Mean of June to September.	+·090	+·080	−·010	+·225	+·220	−·005

The preceding data indicate that the pressure differences or total gradients between Mauritius and the Equatorial Belt, as represented by Zanzibar and the Seychelles, were greater than the mean of the seven years 1894—1900 during January, February and April, but less than the mean in March, June and August. In the other months of the year the gradient was practically equal to the mean. On the average of the monsoon period, however, the gradient was somewhat under the mean.

The following table gives a comparison, week by week, from the 1st of May to the end of September of the air pressure and velocity of the air movement at Port Victoria, Seychelles, in the seven years 1895 to 1901.

Week.	10 A.M. pressure reduced to sea-level and constant gravity at Lat. 45°.	Hourly wind velocity, in miles.						
		1901.	1900.	1899.	1898.	1897.	1896.	1895.
	"							
1st to 7th May .	29·876	6·0	4·9	5·7	3·1	7·1	5·3	5·9
8th to 14th „ .	29·899	4·7	6·3	4·4	2·4	6·4	8·3	3·6
15th to 21st „ .	29·910	3·0	3·4	7·5	7·9	6·2	10·1	3·7
22nd to 28th „ .	29·910	9·8	5·4	19·5	7·5	6·9	9·4	6·4
29th May to 4th June	29·937	8·4	8·8	10·9	7·5	4·5	9·4	9·9
5th to 11th „	29·947	11·5	9·6	8·3	10·8	7·3	9·5	12·9
12th to 18th „	29·982	7·0	9·8	12·2	13·7	7·8	11·8	11·6
19th to 25th „	29·965	8·3	8·9	13·5	10·3	9·0	9·9	10·3
26th June to 2nd July	29·939	7·8	11·3	11·7	13·0	4·0	10·7	13·0

Week.	10 A.M. pressure reduced to sea-level and constant gravity at Lat. 45°.	Hourly wind velocity, in miles.						
		1901.	1900.	1899.	1898.	1897.	1896.	1895.
	"							
3rd to 9th July	29·929	9·4	9·8	15·9	13·9	11·3	12·6	9·7
10th to 16th ,,	29·945	7·1	13·9	14·8	12·2	10·0	11·9	11·3
17th to 23rd ,,	29·955	11·0	11·3	13·3	8·9	9·2	12·6	14·0
24th to 30th ,,	29·950	12·9	12·4	14·8	11·5	16·8	11·3	11·2
31st July to 6th Aug.	29·935	11·5	12·9	13·0	12·4	11·5	15·8	13·2
7th to 13th ,,	29·931	15·0	13·8	14·2	12·3	9·9	14·0	11·7
14th to 20th ,,	29·958	15·7	15·5	15·3	14·3	13·1	13·7	16·0
21st to 27th ,,	29·983	15·8	14·7	15·8	12·3	12·8	15·5	14·0
28th Aug. to 3rd Sept.	30·016	17·2	12·2	12·2	9·9	8·9	16·1	12·0
4th to 10th ,,	30·015	15·3	10·7	15·0	13·4	15·7	10·8	13·3
11th to 17th ,,	29·981	12·5	11·5	12·8	12·5	10·9	13·3	12·9
18th to 24th ,,	30·019	8·6	14·3	7·5	10·3	13·0	12·8	12·1

The above shows that the wind at the Seychelles was considerably weaker than usual during the whole of May and June and the first three weeks of July. The winds began to strengthen in the third week of July and during the last week of the month were about normal in strength. They were unusually strong during the whole of August, the excess above normal being most marked at the end of that month and in the beginning of September. From this date the winds fell off steadily and in latter half of September were below their normal strength. The winds rose temporarily during the second week of June and again in the week ending the 9th of July, but on neither of these occasions did they rise to their normal strength.

There was during the monsoon period a general correspondence between the variations of the strength of the winds at the Seychelles and the variations of the strength of the monsoon currents over the Indian land area. Thus about the time of the first advance of the monsoon over India in June the winds at the Seychelles strengthened and averaged 11·5 miles an hour. Again the strengthening of the winds at the Seychelles about the end of the first week of July may be associated with the advance of monsoon winds which occurred over India about that time. An exact correspondence, however, between the varying strengths of the winds at the Seychelles and the various advances of the monsoon in the early part of the monsoon period does not seem to have obtained an indication that the strength of the winds at the Seychelles is not the only factor which determines the advances of the monsoon over India. The abnormally strong winds at the Seychelles during August may, however, be associated with the strong monsoon which then held over India, while the steady decline of the wind strength in September at the Seychelles was probably similarly related to the feebleness of the monsoon currents over India during the latter part of that month.

The following gives the mean direction of the actual and variation from normal of the air movements at Zanzibar and the Seychelles, and shows that the direction of the air movement in the South East Trades region did not differ largely from normal during the monsoon period. The chief features were (1) a slight to moderate westerly deflection of the winds at Zanzibar, which was least marked in June and most marked in August and September, and (2) a slight easting of the winds at the Seychelles during May, June and July, most marked in May, while in August and September they were practically normal in direction :—

Month.	Zanzibar.		Seychelles.	
	Actual.	Variation, E.	Actual.	Variation, E.
January	N 41° E	+ 6°	N 39° W	+ 4°
February	N 40° E	+ 6°	N 28° W	− 1°
March	N 31° E	Large	N 48° W	−17°
April	S 4° W	− 9°	N 12° W	Large
May	S 1° W	− 6°	S 53° E	+ 9°
June	S 3° E	− 1°	S 27° E	+ 6°
July	S 1° W	− 6°	S 36° E	+ 7°
August	S 3° W	−12°	S 35° E	− 1°
September	S 5° W	−13°	S 40° E	− 1°

IV.—The retreating south-west monsoon period, October to December 1901.—The following gives the mean variation data of this period for the eleven meteorological provinces :—

Meteorological Province.	Variation from normal during retreating south-west monsoon season, October to December.							
	Mean pressure.	Mean maximum temperature.	Mean minimum temperature.	Mean aqueous vapour pressure.	Mean humidity.	Mean cloud amount.	Total rainfall.	Percentage variation of rainfall.
	"	°	°	"			Inches.	
Burma Coast and Bay Islands.	−·003	−0·3	+0·9	+·010	0	+0·6	+3·95	+27
Burma Inland	−·004	−1·1	+1·5				+0·70	+11
Assam	−·005	−0·2	+0·5				+2·61	+42
Bengal and Orissa	−·010	+0·7	+0·8	+·021	0	+0·7	+0·73	+11
Gangetic Plain and Chota Nagpur.	−·012	+2·3	+1·2	+·002	−4	0	−2·36	−79
Upper Sub-Himalayas.	−·007	+2·1	+1·9	−·001	−2	−0·6	−0·78	−67
Indus Valley and North-West Rajputana.	−·014	+2·8	+1·4	+·037	+1	−0·4	−0·39	−89
East Rajputana, Central India and Gujarat.	−·010	+3·6	+3·3	−·011	−7	−0·2	−0·78	−70
Deccan	+·001	+2·9	+1·4	−·037	−6	+0·1	−2·31	−54
West Coast	+·003	+0·3	+1·3	−·002	−3	0	−3·02	−26
South India	−·004	+0·5	+0·5	+·008	0	+0·8	−0·04	0

The following summarizes the chief features of the period:—

(1) The mean pressure was below the normal over the whole Indian area, except in the Deccan and the West Coast districts, where it was in very slight excess. The defect was general over the whole of Upper India, but was most marked in the Indus Valley and North-West Rajputana (−·014″), the Gangetic Plain and Chota Nagpur (−·012″), East Rajputana, Central India and Gujarat (−·010″) and Bengal and Orissa (−·010″).

(2) The maximum temperature was in excess in all divisions, except Burma and Assam, where it was in slight to moderate defect. The excess was most marked in East Rajputana, Central India and Gujarat (+3°·6), the Deccan (+2°·9) and the Indus Valley and North-West Rajputana (+2°·8). The excess was more than 2° in the Gangetic Plain and Chota Nagpur and the Upper Sub-Himalayas. Elsewhere the variations from normal were slight.

The mean minimum temperature of the period was in excess everywhere, the excess being large (3°·3) in East Rajputana, Central India and Gujarat and moderate in the Upper Sub Himalayas, Burma Inland, the Deccan and the Indus Valley and North-West Rajputana. The excess was least in Assam and South India.

The mean temperature of the period was in excess in all divisions. The excess was 2° and over in the Deccan, Gujarat, Rajputana, Central India, the Indus Valley and the Upper Sub-Himalayas and was over 3° in East Rajputana, Central India and Gujarat.

(3) The mean aqueous vapour pressure was in slight excess in the Indus Valley and North-West Rajputana and in Bengal and Orissa, and in slight defect in the Deccan. Elsewhere the variations from the normal were of slight importance. The mean relative humidity was 6 below the normal in the Deccan, but was 7 below normal in East Rajputana, Central India and Gujarat. Elsewhere the variations from the normal were slight.

(4) The rainfall of the period was in considerable excess in Assam, in moderate excess in the Burma Coast and Bay Islands and in slight excess in Burma Inland and Bengal and Orissa. The excessive rainfall in these areas was mainly due to the advance of cyclonic storms from the Bay.

(5) The rainfall of the period was normal in South India and in slight defect on the West Coast.

(6) The rainfall of the period was in considerable to large defect over the remainder of the country, including the Indo-Gangetic Plain, Rajputana, Gujarat, Central India and the Deccan. The driest area was the Indus Valley and North-West Rajputana, where practically no rain was received. The rainfall in the Gangetic Plain and Chota Nagpur was about one-fifth of the normal fall. The only precipitation which occurred in North India during the period accompanied the advance in an east-north-easterly direction of a shallow depression from Gujarat in the last week of December. The weather throughout the period was less disturbed than usual in Upper India.

The more noteworthy features of the period were :—

(1) The delay in the establishment of the retreating south-west monsoon rains on the Madras Coast.

(2) The retreat of the south-west monsoon currents from the south of the Bay slightly earlier than usual.

(3) The unusual tracks of the cyclonic storms during October and November.

(4) The prevalence of unusually fine weather throughout the period in North-West and Central India and the Deccan due to the absence of cold weather disturbances.

The Bay current was slightly below normal strength during the first two months of the monsoon period, and was determined more largely than usual to North-East India and Burma. It was strong in August and September. The Arabian Sea current was, however, feebler than usual throughout the whole season, and withdrew from Upper India during the first week of September, or about ten days earlier than usual.

Northerly winds did not set in over the north and centre of the Arabian Sea until the fourth week of October in consequence of the prevalence of unusual pressure conditions in Northern India.

The chief abnormal features of the distribution of pressure in the month of September were a large excess of pressure over the head of the Peninsula, most marked over the West Satpuras and in Kathiawar, a considerable excess over the greater part of the remainder of India, except in South India, the south of the Bay and in Lower Burma, where the excess was only slight.

The distribution of pressure was abnormal during the greater part of the month of October. Pressure was in large defect over Northern India and the north of the Bay, the defect being greatest in Upper India. The belt of low pressure hence occupied an abnormal position, lying much further north than usual. Pressure remained low in Upper India until the 25th or 26th, and during the first half of the month the eastern extremity of the belt of low pressure extended southwards from Bengal over the north and centre of the Bay, a distribution favouring westerly winds over the west of the Bay. Two storms formed in this belt during the month; the first advanced northwards to Bengal and the second north-westwards across the Deccan to Gujarat. During the second half of the month pressure was lower over Burma and the south-east of the Bay than elsewhere, and abnormal westerly winds hence obtained over the west of the Bay instead of the north-easterly winds which usually obtain. The weather hence continued fine on the Madras Coast. The chief feature of the meteorology in the Bay was hence the contrast between the disturbed weather in the first half of month and the fine quiet weather in the second half.

During November the ordinary north-easterly winds prevailed over the north, centre and west of the Bay, except during the periods of formation and advance of the two storms of the month. These gave fairly general rain to the Peninsula south of Lat. 16° N.

The monsoon winds withdrew completely from the south of the Bay on the 10th of December, or about a week earlier than usual. North-easterly winds extended southwards and were established over whole of the Bay area by the 13th.

The mean pressure data of the period show a persistent defect of pressure in Northern India and an excess in the Deccan.

The pressure conditions were hence unfavourable in the Deccan throughout the season, but in Southern India unfavourable in October only. They were, on the other hand, favourable in Burma and Bengal during October and the rains were hence prolonged beyond their usual date in these areas.

The year.—The following gives a tabular summary of the meteorological data of the year 1901 for the eleven meteorological provinces of India :—

Provincial meteorological data for the year 1901.

PROVINCE.	Barvariation.	Mean maximum temperature of year.	Variation of year.	Mean minimum temperature of year.	Variation of year.	Mean daily temperature of year.	Variation of year.	Mean daily range.	Absolute range during year.	Mean monthly absolute range.	Rainfall of year.	Normal rainfall of year.	Variation from normal of year.	Percentage variation of rainfall.
	Inch.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	°
Burma Coast and Bay Islands	—·004	87·8	+0·3	74·2	+2·1	81·0	+1·2	13·6	38·5	21·9	140·58	139·77*	+ 4·40*	+ 3
Burma Inland	+·009	90·4	+0·3	69·7	+1·0	80·1	+0·7	20·7	61·2	32·1	48·16	46·40	+ 1·76	+ 4
Assam	+·004	84·0	+0·5	67·3	+0·3	75·6	+0·4	16·7	52·6	27·7	89·16	104·89	—15·73	—15
Bengal and Orissa	+·003	87·2	+0·8	69·7	+0·6	78·5	+0·7	17·6	57·5	29·8	68·29	72·72	— 4·43	— 6
Gangetic Plain and Chota Nagpur	+·004	88·6	+0·4	67·6	+0·8	78·1	+0·6	21·2	67·8	34·7	38·90	44·77*	— 6·49*	—14
Upper Sub-Himalayas	+·008	87·5	+0·1	63·7	+0·9	75·7	+0·5	23·8	76·1	39·0	32·17	37·82*	— 5·06*	—13
Indus Valley and North-Western Rajputana.	+·004	92·3	+1·2	65·9	+0·8	79·1	+1·0	26·4	82·1	43·2	6·55	9·66	— 3·11	—32
East Rajputana, Central India and Gujarat.	+·008	91·3	+1·7	68·4	+1·4	79·9	+1·6	23·0	69·8	37·2	16·13	30·15*	—12·58*	—42
Deccan	+·012	90·7	+0·7	68·1	+1·1	79·4	+0·9	22·6	64·8	35·7	36·46	41·18	— 4·34*	—11
West Coast	+·006	86·5	+0·7	75·1	+1·1	80·8	+0·9	11·4	34·0	20·3	98·93	103·03	— 4·10	— 4
South India	+·007	90·8	+0·8	73·0	+1·1	81·9	+0·9	17·9	45·5	27·8	36·94	36·64*	— 0·17*	0

* A reference to Table I at the end of the summary will show that the means in figure columns 12 and 13 are derived from a smaller number of stations than the means in the eleventh figure column. The sum of the figures in columns 12 and 13 therefore will not agree with the figures in column 11.

The mean 8 A.M. pressure of the year was in very slight excess over the whole of India, except the Burma Coast and Bay Islands, where it was in very slight defect. The excess exceeded +·010″ only in the Deccan (+·012″).

The mean maximum temperature was in excess in all divisions. The excess averaged 0°·8 over the whole of India and was greatest in East Rajputana, Central India and Gujarat (+1°·7) and the Indus Valley and North-West Rajputana (+1°·2). Elsewhere the variations from normal were slight.

The mean minimum temperature was similarly excessive everywhere, the excess being most marked in the Burma Coast and Bay Islands (+2°·1) and in East Rajputana, Central India and Gujarat (+1°·4). The abnormal excess was 1° or over everywhere, except in Assam, Bengal and Orissa, the Gangetic Plain and Chota Nagpur, the Upper Sub-Himalayas and the Indus Valley and North-West Rajputana.

The mean temperature of the whole land area was, according to the data in Table I, 0°·9 above the normal, and, according to those of Table II, 0°·6 in excess. The variations for the year were generally less than those for the preceding year and exceeded 1° in only two of the eleven meteorological provinces. The excess was most marked in East Rajputana, Central India and Gujarat (+1°·6) and in the Burma Coast and Bay Islands (+1°·2) and in the Indus Valley and North-West Rajputana (+1°·0). The excess was least in Assam, Bengal and Orissa, the Gangetic Plain and the Upper Sub-Himalayas, where it was about 0°·5.

The mean rainfall for the whole of India was in considerable excess in the first period of the year, in slight defect in the second and third and in slight excess in the fourth. The mean variation for the whole year, taking into consideration the areas represented by the rainfall stations, was 4·13 inches. The deficiency was greatest in percentage amount in East Rajputana, Central India and Gujarat (42 per cent.), the Indus Valley and North-West Rajputana (32 per cent.), Assam (15 per cent.), the Gangetic Plain and Chota Nagpur (14 per cent.) and the Upper Sub-Himalayas (13 per cent.). The variations in the remaining provinces were small in percentage amount: the rainfall of the year was in slight excess in Burma.

Concluding Remarks.—All the more important features of the meteorology of the year have been stated in the preceding discussion. The following gives a very brief summary of the more interesting and important abnormal features with their probable relations to each other.

The chief feature of the cold weather was the absence of well-marked cyclonic storms in Northern India. The storms of the period were of two classes—first, those which passed eastwards from the Persian region or formed over the Baluchistan Plateau, and, secondly, those which developed over the Gulf of Cambay and off the North Bombay Coast. Depressions of the former class were more numerous than usual, but they were, for the most part, very slight, mere waves of low pressure, which in general had little other effect than to cause a temporary reduction of the prevailing excess of pressure in Upper India. Only one of these depressions was associated with the devel-

opment of a secondary depression in the Punjab or with general rainfall over North India, namely, the depression of the 10th and 11th of January in Persia and Baluchistan and the 12th, 13th and 14th in Upper India, a storm which was almost certainly connected with the southward movements of a deep depression from the north-east of Russia in Europe to the Caspian region and North Persia on the 7th, 8th and 9th. The cyclonic storm of the 1st to the 8th February, although it belonged to the second class of storms, also gave rise to a depression in the Punjab. It originated in the Gulf of Cambay and afterwards, moving in an east-north-easterly direction, gave rise to a well-marked depression in the Punjab from the 4th to the 6th.

In connection with this storm it may be noted that on the 3rd pressure fell very rapidly in the Baikal region and rapidly at Gilgit and some of the Kashmir stations and at Sibsagar in the Upper Brahmaputra Valley, but that at Kashgar and Tashkent pressure was steady. On the 4th the fall continued in Kashmir, where it was brisk to rapid, and while a slight rise had appeared in Upper Assam the fall had spread westwards and northwards and was very rapid (exceeding a fifth of an inch) at Kashgar and Tashkent. On this day pressure was falling over the whole of the Indian and Persian regions as well as in Asiatic Turkey, Central Asia and the east and south-east of Europe. It was thus due to a general, and not a local, action, which, although probably not the direct cause of the development of the depression in the Punjab, was probably a favouring condition.

The other class of storms which affected the weather of India during the cold weather period originated for the most part in the Gulf of Cambay, under conditions of relatively high pressure in the west and north-west of the Arabian Sea, and of relatively low pressure off the North Bombay Coast and the Gulf of Cambay, while pressure was relatively high over Berar, Khandesh and the West Satpuras, conditions which favoured the initiation of a cyclonic circulation over the Gulf of Cambay and the North Bombay Coast. These storms for the most part pursued an easterly course over the head of the Peninsula and gave rain over the greater part of the Peninsula as well as in Upper India.

The anti-cyclonic conditions which held over India during the second half of January and the greater part of February and March were probably to be associated with the strongly marked anti-cyclonic conditions which held more or less steadily during these months in Central Asia and the Transcaspian region.

The mean temperature of the cold weather period was unusually low over the greater part of Upper India and the head of the Peninsula. In January the defect of temperature was most marked in the Indo-Gangetic Plain and was probably due to excessive precipitation and an unusually large amount of cloud, a view confirmed by the fact that the defect was mainly in the day temperatures, while the night temperatures were normal or in slight excess. The low day temperatures which in February marked a large area extending from West Bengal through the Central Provinces to the Madras Deccan were probably similarly conditioned. But the large defect in both the day and night temperatures which showed in this month over Kathiawar, Gujarat and Sind cannot be thus explained. For there the night temperatures were in even greater defect than the day temperatures, the amount of cloud less than usual and the rainfall *nil*. It is probable that in this area the low temperatures were in part at least conditioned by the abnormal development of anti-cyclonic conditions in Rajputana and the West Satpuras, which were a marked feature in that area during February.

During March the weather was disturbed in the mountain regions to the north and north-west of India at the end of the first and third weeks of the month. During both disturbed periods rain fell more or less generally over the plains of Upper India and on the hills, while snow fell on the higher ranges down to unusually low levels. Both disturbed periods were succeeded by strongly marked cold waves, due partly to the precipitation in the plains, but probably more largely to the snowfall in the hill regions. In April also there were two important periods of disturbance, at the beginning of the second and in the third week, respectively, each of which was followed by a well-marked cool period. The first, like the disturbances in March, gave rain in the plains of Upper India and snow in the hills. The second storm gave no precipitation in the plains, but was followed by a very strongly marked cold wave, which spread over the whole of Upper India, reducing the temperature as much as 10° or 12° below the normal in the plains of the Punjab. The following gives a short account of the more important features of this disturbance, so far as they can be determined from the available data.

On the 14th pressure was in defect over the whole of India, the defect being most marked in the Indo-Gangetic Plain East, were it amounted to about an eighth of an inch. Over Burma and the Bay area and in the West Punjab the defect from normal was about a twentieth of an inch. Pressure had fallen over almost the whole of India, the fall being brisk in the Gangetic Plain and brisk to rapid at the hill stations in the north of the Punjab and in Kashmir. In the latter areas a depression which had advanced from the west was giving slightly disturbed weather and some showers to the Panjab plains and the hills to the north. Temperature was in moderate to large defect in the centre of the Punjab, the defect being most marked in the area defined by the stations for which the following gives data:—

Station.	Data for 24 hours ending 8 A.M., 14th April, 1901.				
	Rainfall.	Fall of temperature during the preceding 24 hours.	Variation from normal of the		
			Maximum.	Minimum.	Mean.
	Inches.	°	°	°	°
Montgomery . .	0·35	— 9·0	—22·4	+0·1	—11·2
Lahore . . .	0·19	—9·5	—15·8	+0·4	—7·7
Mooltan . . .	0·17	—4·7	—12·0	+0·5	—5·8
Ludhiana . . .	0·30	—6·0	—10·7	+1·1	—4·8
Khushab . . .	0·55	+0·5	—0·6	—2·2	—1·4
Rawalpindi . .	1·09	—0·2	+0·8	—4·3	—1·8

The temperature was in moderate to large excess over the remainder of North-West India. Pressure was lowest at the foot of the Nepal hills and westerly and north-westerly winds were holding over the greater part of Rajputana and the western and central districts of the United Provinces, while in North Bengal and Assam the winds were easterly and north-easterly. On the 15th pressure rose briskly to rapidly in the South Punjab and Rajputana, and rapidly at the stations in Further Kashmir. The low temperatures had spread a little farther to the south and south-west, but had extended only slightly into Rajputana and Upper Sind.

On the 16th pressure fell very rapidly in Central and North-East Punjab and rapidly in Kashmir, while it had risen briskly in the Indo-Gangetic Plain East. Pressure was now lowest in the north-east of the Punjab, where it was over a fifth of an inch in defect, the defect at the Kashmir stations being, however, only slightly less. Temperature had risen in the Punjab, but had fallen in the United Provinces and Rajputana with the eastward movement of the area of low temperature noticed on the previous day. The only precipitation was a few thundershowers in the extreme north of the Punjab.

On the 17th pressure rose very rapidly in the Punjab (over three-tenths of an inch at Lahore and Sialkot) and briskly to rapidly over the remainder of Upper India, where pressure was now in moderate to considerable excess. In Thibet, however, the rise was slight and pressure was still in large defect at Leh. There had been no rain in the Punjab, but a snowstorm was reported from Dras, and it is probable that snow had fallen fairly generally in the interior ranges. Temperature fell very rapidly in the extreme north of the Punjab, defects of 14° and over in the mean temperature being reported from several stations. At Leh, however, the defect from normal in the mean temperature was only 3°·4. By this day the cooling effect of the previous cold wave in the United Provinces had practically disappeared. The following gives 8 A.M. data for the area of defective temperature on the 17th :—

Station.	Variation from normal of			Change during the preceding 24 hours.
	Maximum.	Minimum.	Mean.	
	°	°	°	°
Peshawar	−20·7	−9·1	−14·9	−9·5
Rawalpindi	−20·4	−8·3	−14·4	−8·1
Khushab	−12·8	−8·3	−10·6	−7·5
Montgomery	−12·3	−4·0	−8·2	−4·0
Mooltan	− 8·6	−2·2	−5·4	−5·0
Bikaner	− 7·2	−7·4	−7·3	−5·0
Jaipur	+ 0·9	−1·5	−0·3	+4·0
Agra	− 2·0	−0·1	−1·1	+4·0
Cawnpore	− 0·3	−1·5	−0·9	+3·2

The only change on the 18th was the slight extension of the area of low temperature, as shown by the following data for 8 A.M. of that day :—

Station.	Variation from normal of			Change during the preceding 24 hours.
	Maximum.	Minimum.	Mean.	
	°	°	°	°
Leh	−6·7	−6·9	−6·8	−2·5
Srinagar	−9·4	−4·1	−6·8	+3·5
Peshawar	−11·9	−13·9	−12·9	+2·7
Rawalpindi	−14·8	−3·3	−9·1	+6·5
Khushab	−9·0	+0·1	−4·5	+7·0
Montgomery	−7·7	−8·3	−8·0	+1·0
Mooltan	−7·9	−7·9	−7·9	−1·5
Bikaner	−6·8	−5·7	−6·3	+1·8
Jaipur	−4·1	−0·9	−2·5	−1·3
Agra	−5·6	−3·7	−4·7	−2·5
Cawnpore	−2·7	+0·6	−1·1	−0·5

The temperature had begun to rise in the north and centre of the Punjab and in the outer ranges of the hills, but had fallen at Leh. On this day pressure fell slightly over almost the whole of India.

On the 19th pressure again fell, briskly to rapidly, in Upper India, the fall exceeding ·150″ in the Central Punjab and slightly to briskly over the remainder of India. In Kashmir the fall was brisk only at the outer stations and was slight at the interior stations. Pressure was now in moderate to large defect over the whole of India, the defect being greatest along the line of the hills from Assam to Oudh, where it exceeded ·150,″ and at Leh, where it was ·190″. Some showers had fallen in Lower Bengal, Chota Nagpur and the West Coast, but elsewhere in India no rain had fallen. Pressure was lowest along the line of the hills from Rohilkhand to North Bengal and strong westerly to north-westerly winds were holding in the Gangetic Plain. The effects of the cold wave had extended still further eastwards and temperature had fallen briskly to rapidly in the United Provinces, Chota Nagpur and Bengal, the Central Provinces, Central India and Rajputana. The following gives data for these areas and the Punjab for 8 A.M. of the 19th :—

Area.	Variation from normal of the			Change during the preceding 24 hours.
	Maximum.	Minimum.	Mean.	
	°	°	°	
Punjab	−9·5	−8·1	−8·8	−1·1
United Provinces of Agra and Oudh	−4·4	−6·7	−5·6	−3·3
Chota Nagpur	−1·5	−2·2	−1·9	−4·0
Bengal	+4·4	−4·7	−0·2	−3·8
Central Provinces	−1·1	−2·5	−1·8	−3·1
Central India	−5·0	−6·6	−5·8	−3·4
Rajputana	−5·0	−7·7	−6·4	−2·7

On the 20th the changes of pressure were generally upwards in North-East India, but the fall continued in the Punjab, being rapid in the extreme north of the province. A brisk to rapid fall was reported from Further Kashmir. Pressure was now nearly three-tenths of an inch in defect at Leh and was over one-fifth of an inch in defect at Simla and Murree.

As on the previous day, the only precipitation reported in India was a few showers in South India and in Lower Bengal. In Kashmir, however, conditions were very disturbed and it was reported to be snowing at Leh. Temperature had again fallen in nearly the whole of Northern and Central India. Defects in the mean of 14° to 16° were reported from the north-east and centre of the Punjab. The following gives data for 8 A.M. of this day and shows that temperature was in large defect over the greater part of Upper India:—

Station.	Variation from normal of the			Change during the preceding 24 hours.
	Maximum.	Minimum.	Mean.	
	°	°	°	°
Leh	−14·5	− 4·5	− 9·5	−2·5
Srinagar	−11·1	− 5·5	− 8·3	−4·6
Murree	−17·3	−13·1	−15·2	−0·5
Rawalpindi	−20·3	−15·2	−17·8	−5·3
Sialkot	−19·4	−13·6	−16·5	−4·5
Montgomery	−15·7	−16·3	−16·0	−5·5
Sirsa	−11·6	−10·6	−11·1	+0·5
Quetta	−12·1	−11·9	−12·0	−5·8
Jacobabad	− 9·0	−10·2	− 9·6	−3·3
Jaipur	− 3·8	− 6·9	− 5·4	−1·0
Delhi	− 8·2	− 6·9	− 7·6	−1·5
Agra	− 7·5	− 1·0	− 4·3	+3·3
Lucknow	− 5·0	− 8·7	− 6·9	−2·3
Allahabad	− 6·3	− 8·5	− 7·4	−0·5
Jubbulpore	− 3·6	− 3·5	− 3·6	+1·0
Ranchi	− 5·0	− 3·8	− 4·4	−2·2
Darbhanga	+ 2·1	− 7·3	− 2·6	−2·5

On the 21st snowfall was reported from Dras and Leh and disturbed weather in other parts of Kashmir. Temperature had fallen at all the Kashmir stations and at the hill stations of Upper India, but was beginning to rise in the Punjab. Pressure was rising briskly in the Punjab and Kashmir; at Leh pressure was still more than a fifth of an inch in defect. Pressure was lowest over the east of the United Provinces and westerly and north-westerly winds generally obtained to the west and north-west of that area. The limits of the area of defective temperatures were practically unchanged.

Conditions continued more or less disturbed in Further Kashmir during the next four or five days, but the pressure rose slowly and steadily, and by the 26th was in considerable excess in Kashmir. The precipitation ceased in the interior ranges on the 23rd so far as the available data go, and from the 25th the temperature began to rise more rapidly in North-West India, and by the 27th the abnormal defect had to a large extent disappeared. The following gives mean variation data for representative stations in Upper India for altenate dates from the 21st to the 27th April:—

Station.	Variation from normal of the mean temperature on the			
	21st.	23rd.	25th.	27th.
	°	°	°	°
Leh	−11·9	−13·8	−10·6	−6·4
Srinagar	− 9·3	−10·9	− 8·7	−5·8
Murree	−10·3	− 9·4	− 4·7	−1·9
Rawalpindi	−11·7	−11·9	− 4·6	−3·6
Sialkot	− 7·6	− 8·6	− 2·2	−1·7
Montgomery	−12·5	− 7·5	− 6·8	+2·3
Sirsa	−12·3	− 9·5	− 7·7	−1·4
Quetta	−10·8	− 8·5	− 2·9	−4·4
Jacobabad	− 9·9	− 9·0	− 2·8	−5·4
Jaipur	− 4·5	− 3·0	− 3·5	+1·3
Delhi	−11·0	− 9·6	− 9·2	−3·0
Agra	− 7·5	− 7·4	− 7·9	−3·8
Lucknow	− 2·0	− 9·0	− 7·5	−2·0
Allahabad	− 2·2	− 7·9	− 6·6	−4·2
Jubbulpore	− 3·9	− 6·3	− 3·1	−4·2
Ranchi	− 5·6	− 4·3	− 1·6	−1·3
Darbhanga	+ 0·6	− 3·9	− 2·0	−2·0

This cold wave began to show on the 17th in the north of the Punjab, it reached its maximum intensity on the 20th and thereafter slowly passed away. It dominated the temperature conditions of Upper India for at least a week.

It may be remarked that heavy snow was reported to have fallen on the hills near Chitral during the week preceding the 24th.

There were falls of snow at Bashahr down to 8,500 feet on the 22nd and 23rd and on the higher peaks in the Kumaon Himalayas on the 20th and 21st.

There seems to be some reason for supposing that the snowfall in the interior ranges which occurred on and after the 20th was due to the eastward passage of the low pressure area which showed in the Punjab on the 19th, but if so, its effect on the weather in the interior ranges was much more marked than on the lower ranges bordering on the plains; for not only was the precipitation slighter in the outer, than in the interior, ranges, but the abnormal defect of pressure was also less. If the disturbance passed up from the Punjab plains, it seems to have intensified considerably after passing the outer ranges. The data are, however, too scanty to enable the true nature of the actions to be determined.

The most important feature of the weather during the last week of April was the formation of a cyclonic storm in the south-east of the Arabian Sea on the 24th or 25th.

On the 19th the weather was squally and rainy and the sea rough in an area lying apparently between Lat. 2° S. and 6° S. and about Long. 68° or 70° E., due probably to the first northward advance of the South-East Trades. The data available for this region on this and the following days are unfortunately very scanty, but they seem to indicate that during the succeeding three or four days this region of disturbed conditions moved in a northerly direction. But whether the irregularly cyclonic circulation which showed on the 24th to the west of the Maldives was or was not connected with the northward advance of these disturbed conditions the data are insufficient to determine. By the 25th the depression had apparently developed considerably and showed a definite centre near Lat. 6° N. and Long. 74°E. and was now affecting the winds in Ceylon and on the Malabar Coast. During the next six days it moved in a north-westerly direction, and on the 1st of May seemed to be central near Lat. 16°N. and Long. 63°E. Its course during the next two days is somewhat uncertain. There are, however, indications that on the 2nd of May it was central off the East Arabian Coast, near the Kuria Muria Islands; then recurving it probably passed in a north-easterly direction up the west of the Arabian Sea and was probably central off the mouth of the Persian Gulf on the morning of the 3rd. It seems to have then crossed the Mekran Coast and, continuing to advance in a north-easterly direction, to have passed into South Baluchistan or possibly into Upper Sind by the morning of the 4th. By the morning of the 5th it was central in the north-west of the Punjab, near Khushab, where and at Dera Ismail Khan the barometer had fallen more than ·350″. At the latter station pressure was over four-tenths of an inch in defect. Pressure had also fallen very rapidly in Further Kashmir. By the morning of the 6th pressure had risen very rapidly in the North-West Punjab, where pressure was now in only slight to moderate defect, but it had risen only very slightly in Kashmir, where consequently pressure was still about a fifth of an inch in defect. This storm gave very heavy rain in Baluchistan, the Punjab and Kashmir on the 4th, 5th and 6th, the heaviest falls reported being 11·40 inches at Fort Lockhart in the Kohat district on the 5th and 5·60 inches at the same station on the 6th, making a total of 17 inches in the two days.

In the higher ranges of the Afghan Mountain districts heavy snow was received on the 5th and 6th, and in the Chitral Valley the snow line descended to 6,000 feet on the 5th. On the 5th, 6th and 7th snow fell on the Upper slopes of the Simla hills down to 11,000 feet, while in the Kumaon and Garhwal Himalayas slight to moderate falls occurred on these days. It is almost certain that the disturbed weather and snowfall in the hills was due to this storm. The heavy precipitation which accompanied, this storm caused a very rapid fall of temperature, which was most marked in the north of the Punjab on the 6th and 7th, when mean temperatures more than 18° below normal were recorded. From the 8th, however, the temperature rose rapidly and by the 11th the abnormal temperature conditions had largely passed away.

Disturbed conditions again appeared in the north of the Punjab and in Kashmir about the 16th and 17th, which seemed to be due to the eastward advance of a depression from the Punjab. The disturbance gave snow in the Afghan Mountain districts and in the Simla hills on the 16th and 17th and snow in Further Kashmir on the 17th. The cool wave which followed this precipitation was, however, at no time strongly marked.

It has been noticed that in hot weather seasons following cold weather periods, in which the precipitation in North-Western India has been scanty and below the normal, there frequently occurs heavier rain than usual in North and East Bengal and Assam. The reverse was the case in 1901. The precipitation was in general excess during the cold weather period of 1901 and the rainfall in Assam and Bengal during the hot weather was in general moderate defect.

The following gives the percentage variation of rainfall from the normal in Assam and Bengal in the hot weather seasons of the years characterized by scanty cold weather precipitation in North-Western India, together with data for the hot weather precipitation of 1901 :—

Year.	Percentage variation of hot weather rainfall from normal in			
	Assam.	East Bengal.	North Bengal.	South-West Bengal.
1879	−3	−55	−10	−68
1880	−38	+15	+7	+6
1881	+16	+72	+30	+31
1882	−4	+2	−21	−8
1890	−15	+1	−10	−23
1892	+53	+16	+52	−22
1895	−4	+19	−6	−17
1896	+9	−2	+11	−29
1897	−6	−22	+5	−6
1899	−1	+29	−30	+5
1900	+5	−24	−26	−12
1901	−37	−37	−40	−9

An examination of the daily charts seems to show that rainfall occurs in Assam and East Bengal chiefly, if not solely, during periods when an area of relatively low pressure in North or Central Bengal is causing an indraught of sea winds from the head of the Bay, while at the same time pressure is relatively high over Upper Burma and Assam. Under these conditions the damp southerly current advancing from the Bay area encounters drier north-easterly airs as it rises over the uplands of Assam and the consequent interaction and ascensional movement gives conditions favourable for precipitation. Thus, in March 1901, the rainfall periods in Assam were (1) from the 4th to the 9th, and (2) from the 20th to the 26th, and during both these periods the conditions abovementioned were more or less strongly marked. During the remainder of the month the general conditions were characterized by the prevalence of a more or less well-marked north-easterly or northerly air movement over the

whole of Assam, North and East Bengal and the north of the Bay, in which there was no interaction of opposing currents and little or no ascensional movement. The total rainfall of March was unusually light in Assam, averaging less than a quarter of the normal. In April the rainfall of the month was about normal on the mean of the area. The rainfall, though lighter than usual in daily amount, continued very steady throughout the month, and it is to be noted that the conditions of relatively low pressure in North Bengal and relatively high pressure in Assam held almost uninterruptedly throughout the month. The above view is confirmed by the fact that on the few days when the rainfall ceased in Assam the damp southerly current from the Bay was either weaker, or was deflected towards Central Bengal by unusually low pressures in that area or in regions farther to the west. Similar conditions seemed to govern the incidence of rainfall in Assam in May. The total rainfall of the month was only about half the usual amount, and it may be remarked that the mean pressure conditions of the month seemed to offer some explanation of this abnormality. Pressure was on the mean of the month of May in slight defect in the east of the United Provinces and in the East Satpuras, while in slight excess in lower Bengal, as shown by the following data :—

Area of excessive pressure.		Area of defective pressure.	
Station.	Variation of pressure from normal.	Station.	Variation of pressure from normal.
	"		"
Burdwan . . .	+·015	Allahabad . . .	−·015
Berhampore . . .	+·019	Benares . .	−·001
Calcutta . . .	+·018	Patna	−·002
Narayanganj . .	+·017	Sambalpur . . .	−·002

Pressure was at the same time relatively low in Assam, and the gradients between Lower Bengal and the Upper Assam Valley were consequently slighter and the pressure more uniform than usual. Under these circumstances the amount of interaction between the southerly winds of Lower Bengal and the north-easterly air movement over Assam would naturally be also less than usual.

In April, on the other hand, pressure was in slight relative defect over Bengal and in slight relative excess over the east of the United Provinces and the East Satpuras. There was hence no unusually southing of the winds in Lower Bengal, where on the mean of the month the winds were about due south at Barisal, Narayanganj, Comilla and other stations in East Bengal. In May the winds at these stations had a strong easterly component, and formed part of a well-marked circulation towards an area of low pressure in the west of Bengal and the east of the United Provinces. In March pressure was relatively high in North and West Bengal and over the whole of Assam and in Upper Burma. Consequently the mean winds of the month were easterly and north-easterly over Assam, Upper Burma, north-east of the Bay and in North Bengal, while in Central Bengal they were generally westerly, the usual southerly winds at the head of the Bay being almost entirely absent. It is evident that under these conditions precipitation in Assam would naturally be slight.

As regards the comparative weakness of the monsoon currents over the Indian region during the greater part of June and the first half of July, an examination of the available data seems to show that it was mainly, if not entirely, a result of the weakness and unsteadiness of the South-East Trades during that period. Thus from the 17th to the 23rd of June the winds in the Equatorial belt were unusually weak and irregular in direction, and from the 23rd to the 29th they showed an abnormal easting. During the second half of June, therefore, the South-East Trades were not advancing freely over the Equatorial belt, and as conditions over India itself and in the north of the Arabian Sea were not unfavourable, it can only be surmised that the causes of the failure lay either in the Equatorial belt or to the south of it. During July the data for the Equatorial belt was very scanty, but seemed to indicate that the abnormal conditions in that area which held in the latter part of June had to a large extent disappeared by the end of the first week of July, and that thereafter the winds were more or less normal in direction, if somewhat below their normal strength. The monsoon held strongly during the first three weeks of August, and during that period pressure was almost continually in defect in Upper India, while normal or in slight excess over the south of the Peninsula. On the 25th, 26th and 27th pressure rose briskly to rapidly over the greater part of North-West India and in Bengal and Assam, being apparently connected with large actions of a general nature taking place to the north of the Indian region. At the same time pressure remained relatively low in South Arabia. In consequence of these changes the isobars in the Arabian Sea altered considerably in direction, running about north-east and south-west instead of lying approximately east and west, as during the preceding weeks of the month. The winds were hence much more southerly than usual in the west of the Arabian Sea, while in the east of the Arabian Sea they were veering to north-westerly directions, as they usually do during breaks in the rains. The rain-bearing currents hence failed to penetrate inland, and the rainfall became much lighter and less general. At the beginning of September, therefore, pressure was in large excess over the Konkan Coast and in Kathiawar and Gujarat and in slight to moderate excess over the remainder of the country, while normal or in only slight excess in South Arabia, conditions which led to an abnormal deflection of the monsoon winds to South and South-East Arabia and gave north-westerly winds in the east of the Arabian Sea and on the West Coast. These conditions held without important modification till the 7th or 8th of September, when pressure rose over the greater part of India, more especially in the north of India, and, coincidently, the monsoon currents withdrew from the greater part of North-West India. Subsequent brisk to rapid rises in North-West and North-East India still further increased the excess of pressure, with the result of still further circumscribing the area of rainfall. By the 15th of September pressure was lowest in North-West Bengal and westerly or north-westerly winds were holding over the greater part of Upper India, the rainfall being confined

to Burma and South India, except for a few scattered showers in Bengal. On this date pressure was in considerable to large excess over nearly the whole of Northern India and in the northern half of the Peninsula, the area of largest excess comprising Lower Sind, Gujarat and the western districts of the Central India Plateau and the adjacent districts of the Satpuras. Pressure was about normal in the south of the Bay and in the extreme south of the Peninsula. In consequence of these abnormal features of the pressure distribution, pressure was unusually uniform in the Bay, and during the succeeding days a depression formed in that area of uniform pressure, which, subsequently crossing the coast near Vizagapatam, marched by a curved path north-west to the Nepal hills, where it broke up on the 25th. This storm gave good rain to the districts in its track and fairly general rain to the greater part of North-East India. Pressure rose briskly after the disappearance of this storm and by the end of the month was in considerable to large excess over the head of the Peninsula and in Upper India generally, the excess being most marked in Sind and at the foot of the Nepal hills.

The most important abnormal feature of the pressure distribution during the month of September was, therefore, the steady excess of pressure over the Indian region, most marked over the West Satpuras, Khandesh, Kathiawar and Gujarat and the north-east of the Arabian Sea. It is doubtful if this feature was connected with actions taking place in the areas to the north of India. For, although pressure was on the mean of the month of September about an eighth of an inch in excess at Tashkent, it was in only very slight excess during the first half of the month and was in large excess only during the third and fourth weeks. In India, on the other hand, the excess of pressure was more marked in the first than in the second half of the month. It seems probable that the abnormality may have been connected to some extent with the relatively low pressures in South Arabia (denoted by Aden) towards which the monsoon currents seem to have been largely deflected and to have thus failed to advance towards India with their usual strength. If this were so, the excess of pressure over the north-east and north-west of the Arabian Sea (for pressure was on the mean of the month of September in almost as large excess at the mouth of the Persian Gulf as over Kathiawar) may have been, in part at least, a consequence of the deflection of the currents and the lack of the usual ascensional air movement. The excess, however, once established, would naturally re-act on the general conditions and accentuate the abnormal deflection of the winds.

Early in October the pressure distribution altered very considerably. A widely-extended downward movement of pressure began on the 1st, apparently related to (1) the development of a depression in the Bay, (2) the appearance of disturbed conditions off the West Coast, and (3) the advance of a depression from the areas to the north-west of India, which seemed to be related to the eastward advance of a low pressure area from the Trans-Caspian region. The influence of the storm in the north-west of the Punjab was most marked on the 3rd, when pressure was about ·150" below normal in the West Punjab. On this day pressure was in defect over the whole of India, the defect being considerable to large in the west of the Punjab, slight in North-East India and over the head of the Peninsula, and moderate in the Bay area. The conditions of low pressure thus initiated persisted with only slight alterations throughout the month. Thus on the 6th the first indications showed of the advance of a second depression from the north-west and by the 7th pressure was again in large defect in the north and west of the Punjab, while on that date in the north-east of the Bay pressure was about a fifth of an inch in defect in consequence of the movements of the depression in that area. A brisk to rapid recovery of pressure began on the 8th, and continued on the 9th, as the influence of the depressions in the Bay and in North-West India passed away.

On the 15th pressure began to fall slightly in the east of Burma and over the Mergui Peninsula, and it is possible that this fall may have been connected with the movements of a cyclone in the China Sea which passed westwards from Luzon and Manilla on the morning of the 14th. On the 16th the fall in Burma was brisk to rapid, and there were slight indications of the initiation of a cyclonic circulation of the winds in Lower Burma round a centre lying towards the east. Pressure was now very uniform over the whole of Burma. On the 17th the cyclonic circulation over the south-east of Burma was clearly marked and there were indications of the existence of a low pressure area to the east of Moulmein. By the 18th the centre was near the Gulf of Martaban, but by this time it was only a very feeble disturbance and seemed to have but little influence on the weather. On the 19th and 20th pressure fell rapidly over an immense area, extending from Upper Burma to Chitral and Kashgar. And it may be also noted that on the 20th pressure fell about a fifth of an inch at Nertchinsk, in the east of the Baikal region. The data are insufficient to enable the true nature of this widely-extended action to be fully determined, but its effect was to reduce pressure very largely below normal in Upper India, the defect being especially marked and equal to a fifth of an inch in the west and north-west of the Punjab and at the foot of the Kumaon hills. From these areas the defect diminished south-westwards to the West Coast, where pressure was about normal. A rapid rise of pressure set in on the 21st and continued till the 23rd, when pressure was normal, or in slight excess over practically the whole country. Another low pressure area advanced over North-Western India about the 25th and was followed by another about the 28th, which temporarily reduced pressure considerably to largely below normal in North-Western India. By the end of the month, however, pressure had risen and was practically normal over the whole country.

The most important feature of the weather during the month of October seems, therefore, to have been the unusual number of deep depressions which affected the conditions in the extreme north of India, and, so far as can be judged from the scanty data, still more markedly the mountain areas to the north, for the pressure and other changes at Chitral, Gilgit and Kashgar were frequently greater than those showing in North-West India. The true nature of these actions, however, cannot be determined with certainty, although they seem to have been

mainly confined to the area lying between India and the Pamirs, for in Turkestan and Central Asia generally pressure was on the mean of the month in moderate to large excess. The excess was, it may be noted, greatest in the east of Russia, where also pressure was, on the mean of the month highest. The following gives data in illustration:—

Station.	PRESSURE DATA FOR OCTOBER, 1901.			
	Mean pressure of the month. Mm.	Normal pressure of the month. Mm.	Variation from normal. Mm.	Variation from normal. Inches (approximately).
Perm	772·7	763·3	+9·4	+·376
Oufa	774·4	764·8	+9·6	+·384
Orenburgh	775·0	766·8	+8·2	+·328
Tashkent	773·3	766·4	+6·9	+·276
Barnaul	771·9	767·3	+4·6	+·184
Irkutsk	770·5	767·9	+2·6	+·104
Leh	19·817*	19·775*	.....	+·042*

* Inches.

The above shows that on the mean of the month the main centre of the Central Asian high pressure area was displaced considerably towards the west, showing in the neighbourhood of Orenburgh instead of in its usual place, between Lakes Baikal and Balkash. This fact may have been related to the persistent low pressure which obtained in Upper India during October, but in the absence of adequate data for the region intervening between the Indian and Russian systems it is impossible to determine this point with certainty.

An important feature of the pressure distribution, which persisted throughout the whole of the period of the retreating south-west monsoon and showed also in September, was the relative excess of pressure over the Deccan and the centre of the Peninsula, as compared with the general deficiency of pressure in Upper India. The following gives data:—

Meteorological Province.	Pressure anomaly.					
	September, 1900.	October, 1901.	November, 1901.	December, 1901.	Mean of period, October to December, 1901.	Mean of period, November and December.
	"	"	"	"	"	"
Burma Coast and Bay Island.	—·012	—·003	+·010	0	+·002	+·005
Burma Inland	+·007	—·001	+·009	—·004	+·001	+·003
Assam	—·010	—·011	+·014	—·003	0	+·006
Bengal and Orissa	—·013	—·012	—·001	0	—·004	—·001
Gangetic Plain and Chota Nagpur..	+·001	—·013	—·003	—·005	—·007	—·004
Upper Sub-Himalayas	—·008	—·014	+·004	+·004	—·002	+·004
Indus Valley and North-West Rajputana.	0	—·017	—·005	—·004	—·009	—·005
East Rajputana, Central India and Gujarat.	+·024	+·001	—·005	—·011	—·005	—·008
Deccan	+·021	+·006	+·006	+·006	+·006	+·006
West Coast	—·011	+·029	—·001	—·002	+·009	—·002
South India	—·013	+·009	—·010	+·004	+·001	—·003
General anomaly for whole of India.	+·045	—·025	—·010	+·019	—·005	+·005

It is probable that this feature was closely connected with the first three of the abnormal features of the weather of the retreating monsoon period mentioned on page 973, namely, the delay in the establishment of the retreating south-west monsoon rains on the Madras Coast and the unusually early retreat of the south-west monsoon currents from the south of the Bay, as well as the unusual tracks of the cyclonic storms during October and November. In consequence of this abnormal feature westerly winds held on the East Coast of the Peninsula much later than usual and the north-easterly currents in the west of the Bay area were generally weaker than usual. The storms of the period showed a marked tendency to move in a northerly or north-easterly direction up the East Coast, instead of passing into the Peninsula, a feature which was very probably related to the fact that the winds feeding into the storm area in the western quadrant were dry land winds from the north, and not humid winds from the Arabian Sea.

APPENDIX.

The following is a brief statement of the hailstorms which occurred during the year 1901 in the Punjab, the United Provinces, Assam, the Central Provinces, Central India and Bombay, the reports of which were received too late to be given in the storm sections of the Monthly Weather Reviews of the year:—

DATE. Day, month and year.	AREA AFFECTED BY STORM.	Hour of occurrence.	Duration of storm.	Direction from which it came.	Size or weight of largest stones.	Character of storm.	ESTIMATE OF DAMAGE CAUSED BY STORM.
1901.	PUNJAB.						
Mar. 6	Three villages in the Pindi Gheb tahsil of the Rawalpindi district.						Damaged crops severely.
„ 11	Ten villages of the Sialkot district.						Damaged the Rabi crop seriously necessitating remission of revenue to the extent of 1,078 rupees.
„ 29 and 30.	Thirteen villages of Rawalpindi district.						Damaged crops of eight villages severely.
Mar. 31	Two villages of the Shahpur district.						Damaged crops.
Apl. 13	Three villages in the Pindi Gheb tahsil of the Rawalpindi district.						Damaged crops severely.
„ 13	Two villages in the Mansehra tahsil of the Hazara district.						Damaged crops more or less seriously.
„ 13	Twenty-eight villages in the Charsadda and Peshawar tahsils of the Peshawar district.					Severe	Damaged crops severely.
„ 13 and 14.	Three villages in the Chakwaldhanni and Talagang tahsils of the Jhelum district.						Damaged crops necessitating remission of revenue amounting to 236 rupees.
Sept. 11	About 13 square miles in the Haripur tahsil of the Hazara district.						Damaged crops.
„ 12	Four villages in the Pathankot tahsil of the Gurdaspur district.						Damaged crops necessitating remission of revenue to the extent of 462 rupees.
Sept. 12	Two villages in the Rawalpindi tahsil of the Rawalpindi district.						Damaged crops.
„ 12	Ten villages in the Palampur tahsil of the Kangra district.						Damaged crops severely necessitating remission of revenue to the extent of 596 rupees.
1901.	UNITED PROVINCES.						
Feb. 5	Tahsil Pilibhit of the Pilibhit district.	6 to 6½ P.M.	30 minutes.		About a chhattak in weight.		No information.
„ 6 and 7.	Whole district of Sultanpur.		2 minutes.		Pea		Damaged crops slightly.
Feb. 6	Haraia, Basti, Domariaganj and Bansi tahsils of the Basti district.	3 to 4 A.M.	About an hour.				Damaged crops to the extent of 4 to 12 annas.
„ 6 and 7.	About five villages in Karwi Subdivision of the Banda district.	4 P.M. on 6th and 7 A.M. on 7th Feb.	About 6 or 7 minutes.	NW	About the size of a betelnut.		Damaged crops to the extent of 4 to 16 annas.
Feb. 6 and 7	750 acres in tahsil, Bara and 473 acres in tahsil Meja district, Allahabad.		30 minutes.	W	2 to 3 tolas in weight.	moderately severe.	
Feb. 18	About 26 square miles in the Sadabad tahsil of the Muttra district.						Damaged crops to the extent of 4 to 12 annas.
Mar. 7	Five villages in the Banda Parganna of the Banda district.			W	Pigeon's eggs.		Damaged crops severely to the extent of 4 to 16 annas.
„ 7	Domariaganj, Bansi and the northern part of the Basti tahsils of the Basti district.	Between 3 and 4 P.M.					Damaged crops to the extent of 4 to 12 annas.

Date. Day, month and year.	Area affected by storm.	Hour of occurrence.	Duration of storm.	Direction from which it came.	Size or weight of largest stones.	Character of storm.	Estimate of damage caused by storm.
	United Provinces—*contd.*						
1901. Mar. 7	Seven parganas of the Cawnpore district.		12 minutes.		About the size of a betelnut.		Damaged crops to the extent of 2 to 16 annas.
Mar. 7	288 villages of the Fatehpur district.	3 to 4 P.M.	30 minutes.	NW			Damaged crops severely in 101 villages.
„ 7	726 acres in tahsil Meja of the Allahabad district.		30 minutes.	W	4 to 5 tolas in weight.	Severe	No information.
„ 7	116 villages in Hamirpur district.						
„ 7	Three parganas of the Gonda district.		30 minutes.		1½" in diameter.		No information.
	Assam.						
1901. Jan. 10	Between Panigaon and Goromur, Mauza Telahi.		45 minutes.	NE			No information.
	Central Provinces.						
1901. Jan. 17	About 85 square miles in the Seoni district.		30 minutes.	NW	From about one tola to 1½ chhattaks *in* weight.	Severe	Damaged crops severely in nine villages.
Feb. 7	About 65 square miles in the Lakhnadon tahsil of the Seoni district.		About 20 minutes.	W	From ½ tola to one chhattak in weight.	Severe	Damaged crops severely in nine villages.
„ 18	Wardha, Arvi and Hinganghat tahsils of the Wardha district.		About one hour.		½" diameter	Moderately severe.	Damaged crops to the extent of 2 to 8 annas.

Date. Day, month and year.	Area affected by storm.	Hour of occurrence.	Duration of storm.	Direction from which it came.	Size or weight of largest stones.	Character of storm.	Estimate of damage caused by storm.
	Central Provinces—*contd.*						
1901. Mar. 4	Eight villages in Hoshangabad tahsil and about 150 square miles between the Seoni and Harda tahsils of the Hoshangabad district.	About 4 P.M.			Large		Damaged crops to a certain extent.
„ 4	225 villages in the Betul district.		From 15 to 45 minutes.	NW	Hen's egg.		Damaged crops to the extent of 1 to 12 annas.
	Central India.						
1901. Jan. 7	Seven parganas in Gwalior State.						Damaged crops to the extent of 4 annas in Mauzas Badi and Sena Talai of Pargana Singoli.
„ 12 and 13.	Dhar, Ali Rajpur, Barwani and Dewas States.						
Feb. 17	Five villages in Mow pargana of the Chhatarpur State, Bundelkhand.	10 P.M.	2 hours		Of the size of a mango.		Damaged crops to the extent of 4 to 16 annas.
„ 18	Four villages in the Jigni Jagir of the Bundelkhand Agency.		One hour.		Small.		
„ 18	Fourteen parganas in the Orchha State of Bundelkhand Agency.		One to 2 hours.		From 12 chhattaks in weight.		Damaged crops in two parganas to the extent of 4 to 8 annas.
	Bombay.						
May 13	252 Square miles in Talaka Mahad of the Kolaba district.	2 P.M.	30 minutes.		About an inch in diameter.	Moderate.	No information.

TABLE I.—Abstract of Observations taken at 8 A.M. at 218 Stations in India, Burma, etc., in the year 1901.

Table

Abstract of observations taken at 8 A.M

Number of District.	Meteorological Province or District.	Station.	Elevation of Bar Cistern above sea-level in feet.	Pressure 8 A.M. in inches.							Temperature of Air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea level and to constant gravity 45° Lat.	Highest pressure recorded during year.	Lowest pressure recorded during year.	Absolute range during year.	Mean monthly range of pressure.	Mean of 8 A.M. of year.	Mean maximum of year.	Variation from normal of year.	Mean minimum of year.	Variation from normal of year.	Mean daily temperature of year.	Variation from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.	Absolute range during year.	Mean monthly absolute range.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	I.—Burma Coast and Bay Islands.				−·004							87·8	+0·3	74·2	+2·1	81·0	+1·2	13·6			38·5	21·9
1	Tenasserim and Bay Islands.	Car Nicobar	25	29·819?		29·772?	29·982	29·620	·362	·170	80·0	86·7		77·2		82·0		9·1	94·8	69·2	25·6	15·6
		Port Blair	61	29·857	+·007	29·849	30·014	29·644	·370	·157	81·0	87·8		78·0		82·9		9·8	97·0	70·9	26·1	16·6
		Mergui	96	29·835	+·002	29·863	30·000	29·622	·378	·152	78·4	87·2	−0·2	73·6	+3·0	80·4	+1·4	13·6	95·6	59·3	36·3	21·2
		Tavoy	26	29·904	−·019	29·860	30·079	29·670	·409	·152	76·6	88·0	+0·1	72·3	+1·3	80·2	+0·7	15·7	99·7	55·5	44·2	24·0
		Moulmein	94	29·828	−·009	29·860	30·023	29·609	·414	·163	77·9	89·0	+0·9	73·6	+1·5	81·3	+1·2	15·4	99·4	61·4	38·0	24·2
2	Lower Burma	Rangoon	41	29·845?	?	29·823?	30·059	29·623	·436	·179	76·7	89·3	?	73·6	+0·9	81·5	?	15·7	104·1	57·7	46·4	24·7
		Bassein	27	29·885	+·001	29·847	30·090	29·604	·486	·179	77·2	88·2	+0·3	74·2	+2·4	81·2	+1·4	14·1	101·2	60·2	41·0	22·8
		Diamond Island	41	29·862	−·008	29·838	30·054	29·584	·470	·177	80·7	85·2	?	77·4	+2·4	81·3	?	7·8	91·6	68·2	23·4	15·1
5	Arakan	Akyab	20	29·868	−·007	29·831	30·108	29·511	·597	·225	76·0	86·8		71·4		79·1		15·5	97·9	49·6	48·3	25·2
3	Central Burma	Toungoo	183	29·723	+·003	29·840	29·939	29·482	·457	·165	77·5	85·6	?	70·2	0	79·9	?	19·4	106·1	50·6	55·5	29·9
	II.—Burma Inland				+·009							90·4	+0·3	69·7	+1·0	80·1	+0·7	20·7			61·2	32·1
3	Central Burma	Thayetmyo	130	29·775	+·011	29·847	30·033	29·479	·554	·193	77·2	92·0	+0·3	70·8	+1·2	81·4	+0·8	21·2	108·4	46·8	61·6	32·9
4	Upper Burma	Minbu	165	29·737	+·006	29·847	30·017	29·433	·584	·199	76·7	91·9	?	72·1	+1·7	82·0	?	19·8	109·6	51·5	58·1	31·0
		Yamethin	657	29·236	+·009	29·850	29·476	28·973	·503	·183	76·0	92·4	+0·5	70·4	+1·7	81·4	+1·1	22·0	112·6	48·7	63·9	34·7
		Mandalay	250	29·643	+·011	29·845	29·948	29·341	·607	·219	78·1	93·7	+1·5	72·2	+1·4	83·0	+1·5	21·5	110·6	54·2	60·4	32·0
		Kindat	377	29·520	+·015	29·860	29·834	29·181	·653	·236	71·6	86·4	−0·1	67·2	+0·3	76·8	+0·1	19·2	105·8	45·8	60·0	30·0
		Bhamo	381	29·504	+·002	29·849	29·802	29·186	·616	·225	70·6	86·0	−0·5	65·6	+0·6	75·8	+0·1	20·4	103·5	40·2	63·3	3·7
4(a)	Burma Hill Stations.	Maymyo			26·414*			26·624	26·199	·425	·184*	65·7	78·8		59·1†		69·4†		20·1†	93·0	35·8	57·2	30·7†
		Taunggyi										65·2	75·6	−1·5	56·3	?	66·1		19·5	91·6	33·1	58·5	33·6
		Lashio										66·5	82·9	+1·3	60·8	+1·2	71·9	+1·3	22·1	96·5	38·1	58·4	33·3
	III.—Assam				+·004							84·0	+0·5	67·3	+0·3	75·6	+0·4	16·7			52·6	27·7
7	Surma	Silchar	104	29·794	+·009	29·852	30·110	29·376	·734	·248	72·9	87·4	+1·7	67·6	+0·1	77·5	+0·9	19·8	100·1	45·5	54·6	30·9
9	Brahmaputra	Sibsagar	333	29·571	+·002	29·869	29·891	29·212	·679	·255	69·4	81·2	−0·8	66·3	+0·4	73·8	−0·2	14·9	95·2	44·9	50·3	26·0
		Dhubri	115	29·755	0	29·828	30·101	29·347	·754	·266	71·8	83·3	+0·3	67·9	?	75·6	?	15·4	100·7	47·8	52·9	26·2
	IV.—Bengal and Orissa				+·003							87·2	+0·8	69·7	+0·6	78·5	+0·7	17·6			57·5	29·8
6	East Bengal	Chittagong	87	29·790	−·006	29·827	30·077	29·360	·717	·239	75·4	86·3	+2·0	69·5	0	77·9	+1·0	16·8	99·5	48·6	50·9	27·6
		Noakhali	43	29·828		29·818	30·128	29·396	·732	·236	75·7	87·7		68·8		78·3		18·9	105·4	44·9	60·5	32·7
		Comilla	36	29·811		29·826	30·150	29·414	·736	·247	75·4	87·5		68·8		78·2		18·7	102·3	47·1	55·2	30·5
		Sirajganj	49	29·802		29·801	30·146	29·367	·779	·251	73·0	86·2		69·0		77·6		17·2	106·5	47·4	59·1	28·8
		Narayanganj	26	29·842	+·004	29·816	30·157	29·401	·756	·255	75·5	86·3	?	70·7	+0·4	78·5	?	15·6	100·1	49·7	50·4	28·1
		Barisal	13	29·825?	−·002	29·783?	30·172	29·385	·787	·258	76·8	86·3	+1·1	70·8	+0·6	78·6	+0·9	15·5	100·3	49·2	51·1	27·3
		Mymensingh	59	29·804	?	29·815	30·125	29·396	·729	·242	73·4	84·9	+0·5	69·0	+1·1	77·0	+0·8	15·9	99·4	47·4	52·0	26·4
10	Deltaic Bengal	Faridpur	46	29·821		29·816	30·150	29·373	·777	·264	74·7	86·6		69·0		77·8		17·5	101·8	47·0	54·8	29·8
		Jessore	33	29·823	−·001	29·804	30·153	29·351	·802	·270	75·8	87·6	?	69·8	?	78·7	?	17·8	105·5	46·1	59·4	30·4
		Calcutta	21	29·835	−·001	29·803	30·113	29·345	·848	·281	76·2	87·8	+1·5	70·8	+0·3	79·3	+0·9	18·0	108·2	50·1	58·1	28·6
		Saugor Island	25	29·827?	0	29·796?	30·165	29·355	·810	·272	77·5	86·2	+0·8	73·7	+0·1	80·0	+0·5	12·5	99·4	50·0	49·4	24·9
		Krishnagar	47	29·814		29·810	30·186	29·340	·846	·287	75·7	88·4		69·4		78·9		19·0	109·1	46·9	62·2	32·1
		Midnapore	149	29·697		29·800	30·061	29·253	·808	·259	76·2	89·0		70·6		79·8		18·4	112·4	50·2	62·2	32·1
11	Central Bengal	Bankura	298	29·528?		29·782?	29·881	29·078	·803	·259	75·8	89·3		70·5		79·9		18·8	113·6	49·6	64·0	33·2
		Raniganj	334	29·509		29·799	29·864	29·061	·803	·262	74·6	89·4		69·8		79·7		19·6	113·8	49·2	64·6	33·1

* Mean of 10 months. † Mean of 11 months.

I.

at 218 stations in India, Burma, etc., in the year 1901.

Wind direction. Number of winds from: Calm.	N	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind velocity: Mean velocity in miles per hour by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Hygrometry, 8 A.M.: Mean humidity of year.	Mean vapour tension of year.	Mean cloud amount of year.	Rainfall: Number of rainy days during year.	Normal number of rainy days during year.	Variation.	Rainfall of year.	Normal rainfall of year.	Variation from normal.	Heaviest rainfall during year.	Station.	Meteorological Province or District.	Number of district.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
																			140·58	139·77	+ 4·40		I.—Burma Coast and Bay Islands		
47	22	58	41	29	23	65	24	4	4·5	4·5			86	·883	8·3	122			108·20			5·93	Car Nicobar**	Tenasserim and Bay Islands.	1
16	27	54	9	39	17	60	87	51	8·3		7·4	+12	86	·911	5·7	140			132·77	117·66	+15·11	5·80	Port Blair. ††		
351	4	1		1	3	2			2·2	2·0	1·8	+11	88	·844	4·3	159			190·64	170·46	+20·18	5·05	Mergui.		
344	3	2			4	6	3	3	1·0				90	·836	3·8	160			191·30	198·52	− 7·22	5·72	Tavoy.		
5	25	53	18	63	34	110	20	37	2·5	2·8	2·8	0	84	·805	4·7	147	137·53	+ 9·43	182·46	181·34	+ 1·12	6·53	Moulmein.		
8	16	24	23	19	48	92	60	13	4·5		4·4	+ 2	87	·822	5·7	126	116·84	+ 9·16	98·49	95·27	+ 3·22	6·24	Rangoon‖	Lower Burma	2
107	8	48	7	29	27	40	16	83	4·3		3·8	+13	88	·833	4·4	117	131·49	−14·49	98·42	109·54	−11·12	4·53	Bassein.		
48	38	57	38	14	26	61	43	40	8·8	8·8	7·1	+24	80	·856	4·9	113	120·44	− 7·44	118·12	118·49	− 0·37	5·56	Diamond Island.		
8	102	102	69	41	28	10	3	2	2·2		3·7	−41	89	·816	4·6	122	119·52	+ 2·48	204·44	186·90	+17·54	8·81	Akyab	Arakan.	5
50	42	23	5	147	51	7		39	4·1	4·1	3·0	+37	83	·803	5·6	119	112·67	+ 6·33	80·91	79·74	+ 1·17	3·08	Toungoo.§	Central Burma.	3
																			48·16	46·40	+1·76		II.—Burma Inland.		
81	31	19	8	60	113	22	7	24	4·6		5·1	−10	78	·741	3·6	69	76·12	− 7·12	37·82	37·72	+ 0·10	4·00	Thayetmyo	Central Burma.	3
20	20	4	6	178	29	4	6	98	6·2	7·3			76	·724	4·4	55			34·97	27·60	+ 7·37	3·59	Minbu	Upper Burma.	4
82	40	3	1	140	69		2	28	4·3	4·6			80	·731	4·8	62			44·86	34·08	+10·78	3·65	Yamethin.		
75	42	7	5	22	183	20	5	6					72	·701	1·7	44			31·06	33·74	− 2·68	3·01	Mandalay.		
305	10	12	10	5	8	6	5	3	0·8	0·8			89	·716	4·9	86			81·65	71·55	+10·10	6·04	Kindat.§		
157	22	73	23	4	2	20	19	43	2·2	2·6			88	·683	4·8	92			58·61	73·74	−15·13	2·33	Bhamo.¶		
141	7	28	7	7	27	63	19	6	3·9*				82	·538	5·3*	86†			51·59			2·21	Maymyo‡	Burma Hill Stations.	4(a)
1	24	33	44	46	95	90	25	7					82	·527	5·2	111			63·13	63·84	− 0·71	3·02	Taunggyi.		
	39	93	32	33	48	59	14	46	0·8				86	·580	6·9	94			61·52	57·90	+ 3·62	2·66	Lashio.		
																			89·16	104·89	−15·73		III.—Assam.		
340		5	14	1	1		1	3	0·9	1·6	2·7	−41	86	·735	5·6	118	138·78	−20·78	105·40	125·27	−19·87	4·75	Silchar	Surma.	7
147	30	112	2	28	3	30	2	11	2·1	1·9	2·4	−21	95	·715	8·0	131	129·25	+ 1·75	91·15	96·09	− 4·94	3·75	Sibsagar	Brahmaputra.	9
33	15	92	143	17	17	36	4	7	4·2	4·9	4·7	+ 4	87	·797	4·8	94	92·21	+ 1·79	70·93	93·30	−22·37	5·15	Dhubri.		
																			68·29	72·72	− 4·43		IV.—Bengal and Orissa.		
	38	123	35	104	47	5	3	10	5·8	5·8	5·1	+14	83	·750	4·7	80	98·72	−18·72	85·05	105·33	−20·28	6·70	Chittagong	East Bengal.	6
	70	48	70	47	60	33	21	16	4·0	3·7			85	·785	4·3	120	107·53	+12·47	126·87	118·17	+ 8·70	8·80	Noakhali.		
83	40	4	18	53	141	8	9	9	5·1				81	·741	4·6	95	101·88	− 6·88	77·06	89·25	−12·19	7·60	Comilla.		
229	11	10	31	27	35	11	2	9	1·1	1·2			88	·747	5·2*	69	78·58	− 9·53	71·81	61·53	+10·28	7·35	Sirajganj.		
56	18	25	36	85	66	27	16	36	5·3		4·5	+18	86	·786	5·7	85	94·47	− 9·47	74·92	73·61	+ 1·31	6·10	Narayanganj.		
26	36	38	9	65	81	45	12	53	3·6				85	·813	4·3	96	99·79	− 3·79	78·76	78·16	+ 0·60	6·00	Barisal.		
205	3	1	51	75	10	4	3	13	1·1	1·1			86	·738		106	104·22	+ 1·78	140·19	87·15	+53·34	8·45	Mymensingh.		
198	20	4	6	52	77	6	1	1	1·3	1·2			88	·821	3·5	87	89·26	− 2·26	70·89	68·51	+ 2·38	4·52	Faridpur.	Deltaic Bengal.	16
248	23	7	6	30	29	9	6	7	2·4	2·6	3·2	−19	85	·791	4·2	86	88·78	− 2·78	59·74	65·46	− 5·72	6·20	Jessore.		
61	43	23	28	36	52	68	22	32	4·6		4·8	− 4	82	·777	4·5	76	85·24	− 9·24	70·11	63·66	+ 6·45	5·54	Calcutta.		
2	67	55	17	15	73	80	30	26	12·6		10·7	+18	86	·836	5·3	87	83·03	+ 3·97	72·65	71·84	+ 0·81	4·04	Saugor Island.		
12	27	25	38	41	76	37	55	54	3·6				81	·752	4·4	73	74·24	− 1·24	54·72	54·06	+ 0·66	4·46	Krishnagar.		
51	94	22	9	26	98	24	10	31	3·4	3·5			79	·734	2·9	90	75·89	+14·11	65·80	55·85	+ 9·95	3·30	Midnapore.		
151	4	20	17	38	13	31	57	33	2·3	2·6			72	·664	3·8	75	79·04	− 4·04	54·89	56·24	− 1·35	7·37	Bankura §	Central Bengal.	11
191	21	14	25	22	13	16	19	44	1·4				76	·676	3·4	70	73·02	− 3·02	50·17	54·29	− 4·12	4·70	Raniganj.		

‡ Wind observations of 305 days. § Wind observations of 364 days. ‖ Wind observations of 303 days. ¶ Wind observations of 363 days.
** Wind observation of 313 days.
†† " " of 360 "

Table

Abstract of observations taken at 8 A.M.

Number of District.	Meteorological Province or District.	Station.	Elevation of Bar Cistern above sea-level in feet.	Pressure 8 A.M. in inches.							Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity, 45° Lat.	Highest pressure recorded during year.	Lowest pressure recorded during year.	Absolute range during year.	Mean monthly range of pressure.	Mean of 8 A.M. of year.	Mean maximum of year.	Variation from normal of year.	Mean minimum of year.	Variation from normal of year.	Mean daily temperature of year.	Variation from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.	Absolute range during year.	Mean monthly absolute range.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
11	Central Bengal —*concld.*	Burdwan	99	29·756	+·006	29·804	30·108	29·285	·823	·269	75·7	89·2	+0·4	70·9	+0·5	80·1	+0·5	18·3	111·5	50·0	61·5	31·8
		Naya Dumka	489	*29·330?		*29·784?	29·701	28·915	·786	*·267	75·1	87·8		68·7		78·3		19·1	112·4	46·4	66·0	32·6
		Berhampore	67	29·788	+·002	29·805	30·152	29·336	·816	·268	74·9	88·2	+0·4	69·9	+0·4	79·1	+0·4	18·3	107·5	47·1	60·4	31·0
		Rampur Boalia	70	29·782		29·803	30·143	29·337	·806	·266	75·5	86·8		69·5		78·1		17·3	106·0	47·3	58·7	29·4
		Malda	72	29·774		29·800	30·152	29·334	·818	·262	74·2	87·0		68·3		77·7		18·7	106·4	45·8	60·6	31·5
		Bogra	61	29·791		29·805	30·146	29·375	·771	·243	73·4	87·1	+1·1	68·6	+0·8	77·9	+1·0	18·5	106·3	46·2	60·1	30·1
12	North Bengal	Dinajpur	123	29·726	+·003	29·807	30·071	29·308	·763	·289	71·7	86·7	+0·8	66·5	?	76·6	?	20·2	106·2	42·9	63·3	32·7
		Rangpur	123	29·752?		29·833	30·088	29·352	·736	·260	72·5	85·9		66·9		76·4		19·0	105·2	44·3	60·9	31·4
		Jalpaiguri	284	29·587	+·011	29·836	29·924	29·182	·742	·267	71·0	84·4	+0·5	66·5	+1·3	75·5	+0·9	17·9	98·7	46·1	52·6	28·0
		Cooch Behar	156	29·756†		29·873†	30·073	29·319	·754	·247†	71·5	84·3		67·2		75·8		17·1	98·6	45·7	52·9	27·8
17	North Bihar	Purnea	125	29·733	+·014	29·815	30·077	29·295	·782	·260	71·5	87·3	+0·6	66·9	+0·9	77·2	+0·8	20·4	107·3	41·5	65·8	33·0
14	Orissa	Balasore	48	29·812	?	29·806	30·178	29·372	·806	·277	76·1	89·0	+1·2	70·8	+0·6	79·9	+0·9	18·2	112·5	49·4	63·1	31·7
		False Point	21	29·840	+·004	29·803	30·175	29·420	·755	·262	77·8	85·9	+0·2	72·3	+0·2	79·1	+0·2	13·6	101·5	52·0	49·5	26·0
		Cuttack	80	29·778	+·004	29·802	30·119	29·368	·751	·256	76·7	91·3	−0·1	73·1	+0·7	82·2	+0·3	18·2	111·5	54·1	57·4	30·0
		Puri	20	29·842		29·804	30·180	29·440	·740	·246	78·2	86·6		74·6		80·6		12·0	97·2	57·6	39·6	25·1
	V.—Gangetic Plain and Chota Nagpur.				+·004							88·6	+0·4	67·6	+0·8	78·1	+0·6	21·2			67·8	34·7
15	Chota Nagpur	Hazaribagh	2,007	27·834	+·002	29·810	28·120	27·452	·668	·229	72·6	84·7	+0·4	65·5	+1·1	75·6	+0·8	18·3	108·1	44·7	63·4	31·6
		Ranchi	2,128	27·711	+·008	29·804	27·983	27·327	·656	·223	72·1	84·1	+0·3	66·2	+1·6	75·2	+0·9	17·9	107·8	43·8	64·0	31·2
		Daltonganj	730?	29·109		29·812	29·473	28·666	·807	·241	71·7	90·2		64·5		77·3		25·7	115·6	39·5	76·1	40·5
		Purulia		29·019		29·793	29·351	28·598	·753	·246	74·9	89·1		70·4*		80·6*		20·3*	115·8	49·5	66·3	34·4
		Chaibassa	760	29·076?		29·797?	29·413	28·654	·759	·249	74·6	89·2	−0·6	69·6	+1·0	79·5	+0·2	19·6	111·4	49·2	62·2	33·7
16	South Bihar	Gaya	375	29·465	+·001	29·800	29·821	29·006	·815	·244	75·5	90·2	+0·3	69·4	+1·0	79·8	+0·7	20·8	115·3	46·9	68·4	34·9
		Dehri	351	29·485		29·797	29·845	29·007	·838	·248	75·7	89·9		70·4		80·2		19·5	116·5	48·6	67·9	34·1
		Patna	183	29·659	−·008	29·798	30·032	29·184	·848	·248	75·0	88·2	+0·5	69·2	+1·0	78·7	+0·8	19·0	110·0	45·4	64·6	32·1
		Arrah	190	29·642		29·788	29·998	29·167	·831	·244	74·4	89·0		68·3		78·6		20·7	112·0	44·0	68·0	34·4
		Buxar	239	29·600		29·799	29·974	29·104	·870	·251	75·4	89·1		68·7		78·9		20·4	112·9	44·9	68·0	33·5
17	North Bihar	Bhagalpur	160	29·690		29·807	30·052	29·241	·811	·257	75·2	87·8		68·4		78·1		19·4	107·8	45·6	62·2	32·3
		Darbhanga	166	29·678	−·003	29·802	30·044	29·214	·830	·258	73·3	86·5	+0·9	68·7	+0·1	77·6	+0·5	17·8	103·3	45·8	57·5	29·1
		Muzaffarpur	178	29·678		29·814	30·040	29·201	·839	·260	73·6	86·9		67·1		77·0		19·8	104·2	43·3	60·9	31·3
		Motihari	224	29·627		29·814	30·002	29·143	·859	·269	73·1	86·8		65·2		76·0		21·6	103·0	41·0	63·0	34·3
		Chapra	181	29·661		29·800	30·012	29·182	·830	·247	73·8	88·9		67·7		78·3		21·2	110·1	45·1	65·0	33·1
18	United Provinces (East).	Benares	267	29·564	0	29·792	29·929	29·095	·834	·244	74·2	90·0	+0·3	67·6	+0·7	78·8	+0·5	22·4	117·3	44·9	72·4	37·3
		Allahabad	309	29·520	−·005	29·790	29·893	29·048	·845	·248	75·4	90·9	+1·0	67·3	+0·8	79·1	+0·9	23·6	118·2	41·9	76·3	38·6
23	United Provinces (East Submontane).	Gorakhpur	257	29·582	+·011	29·802	29·944	29·104	·840	·254	73·7	88·0	0	67·5	+0·4	77·8	+0·2	20·5	109·2	45·1	64·1	33·1
19	South Oudh	Lucknow	368	29·457	?	29·792	29·821	28·970	·851	·253	73·0	90·3	+0·7	65·9	+0·5	78·1	+0·6	24·4	118·8	42·2	76·6	39·0
20	North Oudh	Bahraich	403	29·421	+·005	29·794	29·772	28·937	·835	·254	73·6	88·9	+0·8	66·1	+0·5	77·5	+0·7	22·8	114·2	41·6	72·6	37·2
21	United Provinces (Central).	Cawnpore	416	29·419	+·014	29·799	29·782	28·953	·829	·255	73·8	90·6	+1·2	66·0	?	78·3	?	24·6	117·1	42·0	75·1	38·6
		Mainpuri	516	29·310	+·010	29·797	29·683	28·836	·847	·257	73·1	90·8	+1·2	65·4	?	78·1	?	25·4	117·7	40·5	77·2	40·0
	VI.—Upper Sub-Himalayas				+·006							87·5	+0·1	63·7	+0·9	75·7	+0·5	23·8			76·1	39·0
24	United Provinces (West Submontane).	Bareilly	568	29·251	+·007	29·797	29·622	28·765	·857	·266	71·0	87·7	+0·1	65·3	+0·9	76·5	+0·5	22·4	115·0	41·7	73·3	36·5
		Dehra Dun	2,233	27·599	?	29·825	27·908	27·170	·738	·260	65·7	81·2	+0·5	60·3	−0·6	70·8	−0·1	20·9	107·5	38·5	69·0	34·5
		Roorkee	887	28·930	+·004	29·810	29·295	28·435	·860	·270	68·3	86·4	−0·7	61·7	−0·8	74·1	−0·8	24·7	114·7	36·9	77·8	39·2

* Mean of 11 months.

† Mean of 10 months.

I—*contd.*

at 218 stations in India, Burma, etc., in the year 1901—contd.

Wind direction. Number of winds from									Wind velocity.				Hygrometry, 8 A.M.		Mean cloud amount of year.	Rainfall.						Heaviest rainfall during year.	Station.	Meteorological Province or District.	Number of district.
Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N W.	Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Mean humidity of year.	Mean vapour tension of year.		Number of rainy days during year.	Normal number of rainy days during year.	Variation.	Rainfall of year.	Normal rainfall of year.	Variation from normal.				
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
105	32	30	29	17	35	45	34	38	2·9	2·9	3·3	−12	79	·737	4·6	67	77·92	−10·92	48·11	55·09	− 6·98	4·51	Burdwan.	Central Bengal —*contd.*	11
125	14	17	46	50	35	14	23	41	1·4	1·6			74	·663	4·7	68	80·12	−12·12	43·07	57·63	−14·56	3·25	Naya Dumka.		
185	10	7	26	16	57	21	22	21	1·7	1·8	3·5	−49	82	·738	4·5	69	79·14	−10·14	41·92	55·96	−14·04	2·93	Berhampore.		
138	30	24	12	39	35	34	32	21	2·6	2·6			80	·734	2·7	68	74·84	− 6·84	59·30	56·49	+ 2·81	10·50	Rampur Boalia.		
1	37	38	99	40	34	24	48	44	2·4	2·2			82	·727	3·8	59	69·27	−10·27	46·34	55·48	− 9·14	3·41	Malda.		
133	35		64	6	7								83	·724	3·5	80	81·51	− 1·51	77·82	67·33	+10·49	10·62	Bogra.		
	23	160	27	27	21	48	30	29	5·1	5·9			84	·691	4·4	72	77·00	− 5·00	46·89	69·86	−22·97	2·53	Dinajpur . .	North Bengal.	12
94	7	63	84	24	47	19	13	14	3·0	3·2			87	·724	2·8	78	80·33	− 2·33	61·92	82·19	−20·27	3·34	Rangpur.		
8	67	108	76	30	4	11	22	39	1·2	1·6			87	·684	2·1	108	100·58	+ 7·42	114·65	127·71	−13·06	8·66	Jalpaiguri.		
162	4	59	82	36	11	5	5	1	1·7	1·7			88	·707	5·1	107			109·63	131·10	−21·47	6·43	Cooch Behar.		
56	6	77	72	63	4	35	9	41	3·1	2·8	2·4	+17	84	·679	2·9	56	70·60	−14·60	41·95	64·10	−22·15	3·80	Purnea‡. . .	North Bihar.	17
121	50	17	4	3	40	91	21	28	3·7				79	·734	4·0	77	82·26	− 5·26	56·75	65·46	− 8·71	4·36	Balasore . .	Orissa.	14
11	74	9	14	7	27	86	83	54	8·9	8·5	9·1	− 7	85	·833	5·2	66	74·39	− 8·39	57·55	69·97	−12·42	8·86	False Point.		
210	3	15	16		23	58	34	6	2·4		3·4	−29	81	·767	4·7	69	76·95	− 7·95	45·40	63·44	−18·04	2·51	Cuttack.		
77	82	34		4	4	119	12	33	10·6	10·0			83	·829	3·6	51	66·11	−15·11	43·56	56·77	−13·21	4·02	Puri.		
																			38·90	44·77	−6·49		**V.—Gangetic Plain and Chota Nagpur.**		
60	19	7	23	24	39	62	78	53	7·7	6·9	6·8	+ 1	63	·515	4·8	66	76·16	−10·16	43·15	52·36	− 9·21	3·17	Hazaribagh . .	Chota Nagpur.	15
49	17	21	24	21	41	57	55	80	5·6	6·6			68	·550	4·6	76	83·05	− 7·05	55·08	56·35	− 1·27	3·73	Ranchi.		
235	6	7	36	38	4	18	16	5	2·9	3·5			71	·567	2·2	61	63·44	− 2·44	36·60	45·56	− 8·96	2·66	Daltonganj.		
214	7	7	14	13	6	10	49	45	1·6				70	·622	3·1	78			51·97			3·65	Purulia . . .		
183	8	15	14	9	9	58	51	17	1·8	1·6			78	·679	3·4	74	76·20	− 2·20	51·45	53·92	− 2·47	4·29	Chaibassa.§		
66	13	54	12	37	58	30	37	6	5·7	5·1	2·6	+96	69	·630	4·0	57	57·30	− 0·30	44·22	44·94	− 0·72	5·76	Gaya . . .	South Bihar.	16
8	6	8	60	29	105	110	28	11	6·5	5·7			66	·595	3·7	42	54·90	−12·90	31·14	43·11	−11·97	3·35	Dehri.		
17	3	51	94	32	20	57	64	27	4·0	4·7	3·0	+57	74	·675	3·6	52	55·27	− 3·27	29·41	45·10	−15·69	3·12	Patna.		
99	38	10	55	12	7	17	90	37	2·6	2·7			74	·660	2·0	40	57·14	−17·14	32·82	43·85	−11·03	4·70	Arrah.		
15	10	9	117	22	19	27	132	14	5·4	4·9			68	·622	3·4	47	54·89	− 7·89	32·33	41·91	− 9·58	2·59	Buxar . . .		
97	5	42	60	46	19	45	34	17	3·4	3·2			74	·675	4·1	52	61·00	− 9·00	32·97	46·73	−13·76	2·23	Bhagalpur.	North Bihar.	17
85	7	21	88	73	12	18	38	23	3·1		3·6	−14	79	·675	3·2	43	58·42	−15·42	39·75	48·94	− 9·19	4·01	Darbhanga.		
242	1	16	47	32	1		13	12	1·4	1·2			85	·741	2·0	47	56·07	− 9·07	46·82	47·21	− 0·39	5·15	Muzaffarpur.§		
	6	41	168	26	17	37	44	26	4·0				92	·790	2·2	56	56·44	− 0·44	51·04	52·98	− 1·94	4·35	Motihari.		
74	5	18	105	31	10	60	45	17	2·7	3·4			76	·662	3·6	47	52·23	− 5·23	36·35	42·38	− 6·03	2·60	Chapra.		
142	1	15	49	25	9	74	13	7	2·3	2·7	3·9	−31	70	·612	3·5	50	50·49	− 0·49	32·05	39·40	− 7·35	3·26	Benares . . .	United Provinces (East).	18
43	10	24	60	18	19	45	103	43	5·0	5·7	4·6		68	·606	3·5	40	48·47	− 8·47	33·63	39·44	− 5·81	3·75	Allahabad.		
66	49	85	36	12	24	25	38	30	1·8		2·5	−28	75	·652	3·4	47	52·29	− 5·29	48·98	51·35	− 2·37	5·47	Gorakhpur . .	United Provinces (East Submontane).	23
86	21	9	90	13	13	12	113	8	2·2	2·4	3·1	−23	70	·582	3·8	40	46·83	− 6·83	36·06	38·80	− 2·74	4·80	Lucknow . .	South Oudh.	19
87	24	13	117	24	4	11	29	56	3·5	3·4			76	·657	2·0	45			40·86	40·94	− 0·08	6·02	Bahraich . .	North Oudh.	20
148	14	23	25	25	6	45	57	19	2·8				66	·566	2·5	41	41·40	− 0·40	29·46	31·80	− 2·34	4·20	Cawnpore . .	United Provinces (Central).	21
169	9	4	52	9	11	8	89	14	1·5	1·5			62	·522	3·8	30			19·69	33·09	−13·40	2·35	Mainpuri.		
																			32·17	37·82	−5·06		**VI.—Upper Sub-Himalayas.**		24
226	2	19	40	20	2	7	7	42	1·5	1·4	3·5	−60	73	·579	2·7	48	47·17	+ 0·83	39·69	49·61	− 9·92	4·67	Bareilly . .	United Provinces (West Submontane).	
262	8	7	6	15	10	12	30	15	1·2		1·8	−33	70	·463	3·5	78	79·59	− 1·59	89·08	88·88	+ 0·20	6·08	Dehra Dun.		
241	5	7	10	59	15	3	5	20	2·4		2·5	− 4	71	·510	2·5	52	46·57	+ 5·43	41·07	43·82	− 2·75	4·72	Roorkee.		

‡ Wind observations of 363 days.

§ Wind observations of 364 days.

Table

Abstract of observations taken at 8 A.M.

Number of District.	Meteorological Province or District.	Station.	Elevation of Bar Cistern above sea-level in feet.	Pressure 8 A.M. in inches.							Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity 45° Lat.	Highest pressure recorded during year.	Lowest pressure recorded during year.	Absolute range during year.	Mean monthly range of pressure.	Mean of 8 A.M. of year.	Mean maximum of year.	Variation from normal of year.	Mean minimum of year.	Variation from normal of year.	Mean daily temperature of year.	Variation from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.	Absolute range during year.	Mean monthly absolute range.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
22	United Provs., West.	Meerut	738	29·072	?	29·797	29·443	28·580	·863	·272	69·6	88·4	+0·7	63·7	+0·2	76·1	+0·5	24·7	114·8	41·2	73·6	38·4
26	South East Punjab	Delhi	718	29·104	+·005	29·802	29·502	28·626	·876	·272	72·8	88·6	−0·6	68·5	+1·4	78·6	+0·4	20·1	114·2	42·2	72·0	35·3
28	Central Punjab	Lahore	702	29·114	+·008	29·805	29·597	28·578	1·019	·331	69·7	89·7	+1·0	63·3	+2·0	76·5	+1·5	26·4	118·1	37·0	81·1	43·3
27	South Punjab	Sirsa	662	29·158	+·008	29·801	29·622	28·643	·979	·299	72·7	92·0	+0·4	64·6	+1·2	78·3	+0·8	27·4	116·8	36·0	80·8	43·0
		Patiala	818	29·011		29·818	29·393	28·507	·886	·285	70·4	86·6		63·0		74·9		23·6	115·0	36·5	78·5	38·7
29	Punjab (Submontane).	Ludhiana	812	29·004	+·006	29·807	29·430	28·494	·936	·292	69·8	87·3	−1·4	64·6	+1·4	76·0	0	22·7	116·8	39·1	77·7	38·7
		Sialkot	830	28·983	+·013	29·807	29·452	28·461	·991	·319	70·0	88·6	+1·1	64·3	+2·2	76·5	+1·7	24·3	119·0	37·0	82·0	42·0
		Umballa	892	28·923	+·017	29·810	29·318	28·426	·892	·284	67·8	86·5	−1·2	61·4	?	74·0	?	25·1	114·9	34·0?	70·9?	39·3
31	North Punjab	Rawalpindi	1,676	28·146	+·007	29·859	28·584	27·633	·951	·326	66·2	84·0	?						116·0			
	VII.—N.-W. Frontier Province, Indus Valley and North-West Rajputana.		...	...	+·004	...	...	...	...	...	...	92·3	+1·2	65·9	+0·8	79·1	+1·0	26·4	...	...	82·1	43·2
31	North Punjab	Peshawar	1,110	28·738	+·003	29·862	29·211	28·192	1·019	·339	67·6	85·7	+0·1	59·2	+0·3	72·5	+0·2	26·5	117·0	32·9	84·1	44·4
32	West Punjab	Khushab	612	29·213	?	29·813	29·722	28·662	1·060	·351	71·4	89·8	+0·6	64·4	+0·8	77·1	+0·7	25·4	118·4	36·4	82·0	42·6
		Montgomery	558	29·255	+·003	29·793	29·752	28·705	1·047	·338	73·6	91·7	?	64·3	+0·1	78·0	?	27·4	119·5	34·0	85·5	45·3
		D. I. Khan	594	29·245	−·006	29·804	29·771	28·665	1·106	·364	69·2	90·1	+0·1	61·7	−0·7	75·9	−0·3	28·4	118·7	34·0	84·7	46·2
		Mooltan	420	29·398	−·004	29·798	29·930	28·851	1·079	·344	71·9	93·2	+2·0	66·5	+1·9	79·9	+2·0	26·7	119·5	38·5	81·0	42·5
47	Sind	Jacobabad	186	29·630	+·002	29·782	30·114	29·090	1·024	·325	73·4	97·5	+2·5	65·1	+0·4	81·3	+1·5	32·4	126·0	34·0	92·0	50·5
		Hyderabad	96	29·752	+·017	29·802	30·226	29·234	·992	·291	74·6	94·1	+1·1	68·0	?	81·1	?	26·1	120·7	40·0	80·7	42·0
		Kurrachee	30	29·851	+·012	29·832	30·283	29·340	·940	·274	75·6	89·3	+1·2	70·7	+0·8	80·0	+1·0	18·6	116·4	42·2	74·2	36·0
51	West Rajputana	Bikaner	771	29·057	+·001	29·811	29·506	28·606	·900	·291	75·2	93·4	+1·9	69·5	+2·0	81·5	+1·9	23·9	116·9	41·1	75·8	40·1
		Pachpadra	380	29·513*		29·860*	29·892	29·041	·851	·282*	75·0	96·0		66·5		81·3		29·6	121·0	35·2	85·8	44·7
		Jodhpur	782	29·067		29·844	29·450	28·620	·830	·265	75·3	94·1		69·1		81·6		25·0	118·3	41·1	77·2	40·6
	VIII.—East Rajputana, Central India and Gujarat.		...	...	+·008	...	...	...	...	...	...	91·3	+1·7	68·4	+1·4	79·9	+1·6	23·0	...	...	69·8	37·2
50	East Rajputana	Jaipur	1,431	28·427	+·010	29·838	28·781	28·012	·769	·248	74·6	91·8	+1·8	66·8	+2·2	79·3	+2·1	25·1	116·2	40·5	75·7	41·5
		Kotah	819	29·022			29·407	28·602	·805	·243	77·0	93·2		70·6		81·9		22·5	117·1	45·5	71·6	38·6
		Sambhar	1,254	28·602	?	29·844	28·970	28·196	·774	·255	72·1	91·3	+2·6	65·8	+1·3	78·6	+2·0	25·6	115·0	40·0	75·0	41·7
		Ajmer	1,611	28·253	+.007	29·857	28·604	27·847	·757	·251	71·8	90·0	+1·5	66·3	+2·8	78·2	+2·2	23·8	114·4	37·9	76·5	39·3
		Udaipur	1,925	27·950?		29·856	28·248	27·580	·662	·222	72·7	88·6		64·9		76·8		23·8	110·1	38·2	71·9	38·5
		Deesa	466	29·407	+·015	29·836	29·751	28·994	·757	·228	76·4	95·8	+2·6	68·7	+2·0	82·3	+2·3	27·0	117·1	38·0	79·1	41·9
46	Kathiawar and Cutch.	Bhuj	395	29·486	+·012	29·840	29·846	29·041	·805	·246	76·9	92·5	+1·4	68·3	?	80·4	?	24·2	114·8	43·0	71·8	38·5
		Jamnagar	61	29·833		29·840	30·182	29·398	·784	·225	76·4	91·0		68·6		79·8		22·5	108·7	43·7	65·0	35·2
		Rajkot	429	29·459	+·013	29·849	29·782	29·045	·737	·210	74·9	93·9	+0·9	66·2	+0·3	80·1	+0·7	27·7	110·9	39·1	71·8	41·2
		Veraval	8	29·881	+·012	29·841	30·176	29·496	·680	·192	76·2	85·4	+0·5	71·4	+0·6	78·4	+0·5	14·0	104·7	49·3	55·4	27·4
		Dwarka	37	29·852		29·835	30·208	29·439	·769	·221	78·1	85·4		73·2		79·3		12·2	98·9	46·6	52·3	22·5
		Bhavnagar Para	55	29·859	+·001	29·842	30·160	29·472	·688	·209	76·7	94·9	+2·6	69·1	?	82·0	?	25·8	112·7	44·2	68·5	38·6
49	Central India	Nowgong	757	29·086	−·001	29·815	29·487	28·659	·828	·242	73·2	89·2	?	66·3	+1·1	77·8	?	22·9	115·0	41·5	73·5	37·5
		Indore	1,823	28·050	?	29·834	28·381	27·740	·641	·196	73·8	89·2	+1·7	64·7	+1·2	77·0	+1·5	24·5	111·3	40·6	70·7	39·3
		Neemuch	1,630	28·247	?	29·858	28·585	27·857	·728	·227	73·0	90·1	+1·5	65·2	+1·0	77·7	+1·2	24·9	112·1	39·1	73·0	39·5
45	Gujarat	Surat	39	29·864	?	29·846	30·147	29·508	·639	·203	77·8	93·4	+2·3	71·0	?	82·3	?	22·4	114·0	47·3	66·7	37·8
		Ahmedabad	163	29·722	?	29·835	30·086	29·312	·774	·224	78·2	96·0	+2·9†	71·8	+1·1	83·9	+2·1*	24·3	115·4	47·2	68·2	37·4
22	United Provs., West.	Agra	555	29·275	+·001	29·801	29·666	28·796	·870	·262	74·4	91·4	+1·0	69·0	+1·6	80·2	+1·3	22·4	114·5	43·4	71·1	39·4
21	United Provs., Central.	Jhansi	858	28·995	+·009	29·823	29·328	28·557	·831	·241	76·0	91·9	+1·2	71·0	?	81·5	?	20·9	115·4	46·7	68·7	5·1

* Mean of 11 months.

I—*contd.*

at 218 stations in India, Burma, etc., in the year 1901—contd.

Wind direction. Number of winds from									Wind velocity.				Hygrometry 8 A.M.		Mean cloud amount of year.	Rainfall.					Heaviest rainfall during year.	Station.	Meteorological Province or District.	Number of District.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean velocity in miles per hour, by anemometer uncorrected.	Mean velocity corrected (where possible.)	Normal.	Percentage variation.	Mean humidity of year.	Mean vapour tension of year.		Number of rainy days of year.	Normal number of rainy days during year.	Variation.	Rainfall of year.	Normal rainfall of year.	Variation from normal.				
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
204	3	6	18	27	2	22	54	28	1·8	1·8	2·2	−18	68	·515	2·8	34	39·18	− 5·18	28·46	32·89	− 4·43	4·33	Meerut†	United Provinces West.	22
61	15	11	32	40	7	12	106	81	3·0	2·6	3·6	−28	57	·483	2·9	31	33·74	− 2·74	21·07	30·03	−8·96	2·52	Delhi	South-East Punjab.	26
194	30	19	17	40	11	7	23	24	2·2		2·5	−12	66	·501	2·3	18	28·26	−10·26	17·96	21·95	− 3·99	5·72	Lahore	Central Punjab.	28
58	5	46	15	86	12	89	5	49			3·6		58	·465	1·5	19	23·39	− 4·39	5·48	15·55	−10·07	0·65	Sirsa	South Punjab.	27
66	54	18	51	68	19	8	42	39	?	?			69	·538	2·7	38			25·71			4·96	Patiala.		
100	15	32	15	89	8	22	53	31	2·9	2·6	1·5	+73	66	·506	2·5	32	37·00	− 5·00	30·51	30·90	− 0·39	5·40	Ludhiana	Punjab (Submontane).	29
98	35	86	75	25	2	5	14	25	2·3		1·8	+28	64	·487	1·9	44	38·36	+ 5·64	28·50	34·12	−5·62	3·61	Sialkot.		
245	1	3	13	51	1	1	13	37	1·8*				76	·546	2·4	40			31·60	33·11	− 1·51	3·71	Umballa.		
267	18	22	13	7	3	7	9	19	2·5	2·3	2·0	+15	63	·423	2·0	42	46·81	− 4·81	26·94	35·17	− 8·23	2·75	Rawalpindi	North Punjab.	31
																			6·55	9·66	−3·11		VII.—N.-W. Frontier Province, Indus Valley and North-West Rajputana.		
247	21	5	3	4	27	10	18	30	1·7	1·9	3·4	−44	63	·453	2·2	23	21·56	+ 1·44	14·52	13·54	+ 0·98	3·85	Peshawar	North Punjab.	31
111	25	104	54	13	15	24	13	6	5·6	6·5			54	·442	1·6	21	16·40	+ 4·60	14·36	10·39	+ 3·97	3·36	Khushab	West Punjab.	32
42	38	40	36	63	60	55	13	18	6·7	5·8			47	·396	1·7	9	15·70	− 6·70	4·87	10·88	− 6·01	1·35	Montgomery.		
224	39	61	1	16	3	2	2	10	1·6	1·7	1·8	− 6	68	·543	1·6	14	14·73	− 0·73	11·88	8·42	+ 3·46	4·50	D. I. Khan.‡		
168	12	41	3	44	31	49	3	16	1·5	1·9	2·5	−24	60	·505	1·6	9	11·72	− 2·72	2·54	7·56	− 5·02	0·81	Mooltan.		
188	12	13	50	52	18	6	3	23	2·5	2·6	3·4	−24	56	·511	1·7	6	6·63	− 0·63	2·68	4·08	− 1·40	0·92	Jacobabad	Sind.	47
12	109	7	1	6	33	163	21	13	9·5	9·9	10·1	− 2	54	·496	1·6	6	10·14	− 4·14	1·96	7·06	− 5·10	0·78	Hyderabad.		
35	14	55	38	10	10	66	110	27	8·9	11·2	13·3	−16	70	·654	2·9	3	9·73	− 6·73	1·37	7·92	− 6·55	0·54	Kurrachee.		
16	17	33	40	42	38	36	103	40	8·0		4·8	+67	53	·520	2·2	12			6·67	11·95	− 5·28	2·42	Bikaner	West Rajputana.	51
2	44	46	57	10	79	69	42	16	7·0*	6·9*	5·2*	+33	54	·515	1·2	8			3·12	10·37	− 7·25	0·94	Pachpadra.		
78	13	78	29	5	12	88	53	9	5·3	4·7			45	·427	3·1	11			8·09	14·15	− 6·06	1·90	Jodhpur.		
																			16·13	30·15	−12·58		VIII.—East Rajputana, Central India and Gujarat.		
67	36	70	26	8	4	41	61	52	3·8		5·1	−25	54	·476	3·0	22	39·10	−17·10	15·66	28·87	−13·21	3·35	Jaipur	East Rajputana.	50
105	33	22	8	14	4	52	60	67	4·9	5·8			51	·476	2·3	29			21·90	29·92	− 8·02	2·00	Kotah.		
186	29	18	14	3	3	3	76	33	4·4		6·7	−34	56	·468	2·6	17	32·76	−15·76	12·92	23·07	−10·15	1·95	Sambhar		
135	6	28	1	19	7	54	90	25	5·3		4·3	+23	63	·518	3·0	26	33·14	− 7·14	13·57	22·30	− 8·73	2·05	Ajmer.		
176	20	1	3	2	4	49	64	37	4·0	4·0			57	·488	2·6	30			18·11			2·08	Udaipur.§		
	28	84	56	11	41	86	37	22	10·4		10·3	+ 1	51	·494	2·9	13	28·81	−15·81	7·85	26·73	−18·88	2·20	Deesa.		
10	17	7	8	7	15	81	186	34	13·0		10·2	+27	66	·650	2·1	11			5·33	14·60	− 9·27	1·95	Bhuj	Kathiawar and Cutch.	46
7	14	47	19	19	52	136	53	18	11·9	12·7			66	·640	2·3	15			4·01			1·12	Jamnagar		
21	26	31	23	16	9	54	126	54	9·4	9·3	9·2	+ 1	60	·561	3·1	21	34·14	−13·14	13·78	28·67	−14·89	1·62	Rajkot.		
1	84	58	9	9	6	50	93	55	8·9	10·4	7·9	+32	68	·651	3·7	9			2·72	21·02	−18·30	0·30	Veraval.		
	47	32	15	4	13	97	66	52	14·4				76	·761	3·3	8			3·43			0·65	Dwarka.‖		
14	47	9	4	5	9	91	69	117	6·9*	7·0*			53	·526	3·1	21			16·15	22·59	− 6·44	2·56	Bhavnagar Para.		
87	34	10	42	9	10	34	119	20	2·3	2·3	2·5	− 8	66	·544	3·7	45	49·81	− 4·81	37·37	44·43	− 7·06	4·10	Nowgong	Central India	49
91	14	26	15	31	11	25	119	33	4·4		4·2	+ 5	65	·557	4·1	40	47·95	− 7·95	21·94	34·90	−12·96	2·13	Indore.		
13	26	82	59	8	3	63	89	22	9·1	8·2	10·1	−19	58	·497	2·7	28	39·05	−11·05	14·25	32·29	−18·04	3·35	Neemuch.		
27	52	33	49	20	51	51	63	19	6·7	7·1	9·0	−21	65	·656	3·1	26	49·28	−23·28	18·45	46·33	−27·88	3·05	Surat	Gujarat.	45
2	36	52	65	9	6	97	8	80	5·3				53	·542	3·1	25			19·13	37·98	−18·85	2·70	Ahmedabad.§		
36		39		71		127	1	91	4·1	4·8	4·2	+14	60	·529	2·2	29	38·91	− 9·91	16·41	29·12	−12·71	2·50	Agra	United Provinces West.	22
32	21	21	19	15	13	84	78	22	4·2		3·4	+24	63	·564	1·9	48	49·51	− 1·51	43·58	39·52	+ 4·06	4·60	Jhansi	United Provinces Central.	21

† Wind observations of 364 days. ‡ Wind observations of 358 days.
§ ,, ,, 256 ,,
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Table

Abstract of observations taken at 8 A.M.

Number of District.	Meteorological Province or District.	Station.	Elevation of Bar Cistern above sea-level in feet.	Pressure 8 A.M. in inches.						Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea level and to constant gravity 45° Lat.	Highest pressure recorded during year.	Lowest pressure recorded during year.	Absolute range during year.	Mean monthly range of pressure.	Mean of 8 A.M. of year.	Mean maximum of year.	Variation from normal of year.	Mean minimum of year.	Variation from normal of year.	Mean daily temperature of year.	Variation from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.	Absolute range during year.	Mean monthly absolute range.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	IX.—Deccan.				+·012							90·7	+0·7	68·1	+1·1	79·4	+0·9	22·6			64·8	35·7
38	Bombay Deccan	Belgaum	2,539	27·377	+·010	29·859	27·587	27·103	·484	·156	71·7	84·1	P	65·0	+1·0	74·6	P	19·1	100·3	43·6	56·7	30·1
		Sholapur	1,590	28·312	+·007	29·861	28·561	28·067	·494	·171	76·4	93·2	+0·6	69·4	+1·9	81·4	+1·2	23·8	109·7	49·1	60·6	37·2
		Poona	1,840	28·072	+·008	29·881	28·326	27·812	·541	·161	71·7	90·1	+1·4	64·7	P	77·4	P	25·4	108·1	42·0	66·1	38·7
		Bijapur	1,946	27·970	+·016	29·870	28·200	27·723	·477	·165	74·5	91·6	P	68·4	+0·9	80·0	P	23·2	105·9	49·6	56·3	36·6
40	Khandesh	Malegaon	1,430	28·464	+·011	29·864	28·757	28·150	·607	·192	74·8	93·2	+2·3	66·0	+1·2	79·7	+1·8	27·2	110·8	37·2	73·6	40·4
		Ahmednagar	2,152	27·771	+·014	29·878	28·032	27·508	·524	·179	73·9	89·9	+1·4	64·4	+1·1	77·2	+1·3	25·5	108·0	39·9	68·1	39·8
41	Berar	Akola	930	28·557	+·019	29·852	29·267	28·666	·601	·202	75·2	93·2	+1·1	66·7	+0·4	80·0	+0·7	26·5	116·4	43·0	73·4	40·1
		Amraoti	1,215	28·669	+·022	29·850	28·972	28·382	·590	·196	76·2	92·3	+0·7	69·7	+1·5	81·0	+1·1	22·6	115·5	50·4	65·1	35·1
42	Central Provinces, West.	Khandwa	1,044	28·835	+·015	29·851	29·161	28·526	·635	·203	74·8	93·5	+2·3	67·9	+1·5	80·7	+1·9	25·6	117·2	40·7	76·5	40·2
		Hoshangabad	1,006	28·873	P	29·856	29·215	28·513	·702	·214	73·7	90·7	+0·5	67·6	+0·9	79·2	+0·7	23·1	115·0	44·2	70·8	36·6
		Nagpur	1,025	28·841	+·013	29·835	29·172	28·527	·645	·209	75·0	92·1	+0·4	69·1	+0·7	80·6	+0·6	22·9	115·7	49·2	66·5	36·1
43	Central Provinces, Central.	Chanda	634	29·258	+·007	29·847	29·585	28·963	·622	·202	76·1	92·3	?	69·6	+1·2	80·9	P	22·7	115·7	44·1	71·6	36·6
		Seoni	2,033	27·841	+·019	29·837	28·133	27·529	·604	·200	72·5	87·5	0	64·8	0	76·2	0	22·5	109·9	45·0	64·9	35·4
		Jubbulpore	1,327	28·518	P	29·826	28·868	28·149	·719	·217	71·5	88·4	+0·3	64·7	+0·4	76·6	+0·4	23·7	112·0	39·4	72·6	37·9
		Saugor	1,807	28·062	+·014	29·838	28·409	27·694	·715	·213	74·3	88·2	+0·5	67·6	+2·0	77·9	+1·3	21·6	111·5	43·1	68·4	34·7
49	Central India	Sutna	1,040	28·793	+·002	29·812	29·170	28·379	·791	·233	73·8	88·9	+1·1	67·5	+2·6	78·2	+1·9	21·3	113·6	41·8	71·8	36·4
44	Central Provinces, East.	Raipur	970	28·886	+·012	29·820	29·213	28·537	·676	·217	75·3	89·8	−0·2	69·8	+0·9	79·8	+0·4	20·0	113·0	47·4	65·6	33·5
		Sambalpur	486	29·370	+·001	29·813	29·720	28·975	·745	·237	76·1	90·3	−0·6	70·5	+0·6	80·4	0	19·8	112·1	47·6	64·5	33·6
39	Hyderabad, North.	Indur		28·599			28·844	28·325	·519	·187	76·6	90·2		68·0		79·1		22·2	108·8	44·1	64·7	34·0
		Bidar	2,165P	27·722		29·828	27·970	27·491	·479	·204	75·7	88·9		67·0		78·0		21·9	106·4	39·2	67·2	33·9
53	Hyderabad, South	Gulbarga	1,502	28·401		29·859	28·673	28·136	·537	·178	77·1	93·3		69·9		81·6		23·4	108·4	50·5	57·9	36·0
		Raichur	1,326	28·578	+·009	29·862	28·829	28·302	·527	·173	77·7	92·3	+0·4	72·3	+0·6	82·3	+0·5	20·0	107·6	55·2	52·4	31·7
		Hyderabad (Dn.)	1,690	28·209	+·012	29·858	28·471	27·964	·507	·186	75·2	90·0	P	69·9	+2·0	80·0	P	20·1	106·9	54·3	52·6	31·1
		Secunderabad	1,787	28·110	P	29·857	28·373	27·864	·509	·183	74·3	91·1	+1·0	69·5	+1·5	80·3	+1·3	21·6	109·3	53·7	55·8	34·1
		Hanumkonda	871	29·007		29·850	29·302	28·724	·578	·200	77·5	91·3		72·0		81·6		19·4	109·2	53·7	55·5	31·7
	X.—West Coast.				+·006							86·5	+0·7	75·1	+1·1	80·8	+0·9	11·4			34·0	20·3
37	Konkan	Bombay	37	29·881	+·010	29·858	30·124	29·545	·579	·175	78·3	86·3	+0·8	75·5	+0·8	80·9	+0·8	10·8	98·5	58·5	40·0	20·2
		Ratnagiri	110	29·798	+·010	29·846	30·003	29·431	·572	·164	79·0	87·6	+0·4	74·2	+1·5	80·9	+1·0	13·4	100·8	56·0	44·8	25·0
		Mormugao	60	29·867	+·007	29·862	30·084	29·502	·582	·163	78·9	86·5	+0·3	75·9	+0·8	81·2	+0·6	10·6	95·0	62·8	32·2	19·6
		Goa	199	29·755S	P	29·892S	29·924	29·598	·326	·147	78·6	84·4	P	75·3	+0·8	79·9	P	9·1	92·5P	61·5	31·0P	18·6
		Karwar	44								76·3	86·4	+0·5	73·8	+1·3	80·1	+0·9	12·6	93·8	59·0	34·8	22·3
33	Malabar	Cochin	11	29·936	+·004	29·874	30·099	29·793	·306	·129	79·2	89·2	+2·2	75·7	+1·2	82·5	+1·7	13·5	96·5	67·8	28·7	20·4
		Calicut	27	29·910	P	29·866	30·070	29·718	·352	·138	78·9	87·0	+0·3	74·6	+0·8	80·9	+0·5	12·4	94·4	61·0	33·4	20·1
		Mangalore	65	29·872	0	29·869	30·063	29·589	·474	·146	79·0	86·9	+0·3	75·1	+1·2	81·0	+0·7	11·8	98·8	63·5	35·3	21·9
		Trivandrum	198	29·734	P	29·864	29·877	29·597	·280	·125	78·1	84·4	+0·4	75·5	P	80·0	P	8·9	91·5	65·5	26·0	15·5
	XI.—South India.				+·007							90·8	+0·8	73·0	+1·1	81·9	+0·9	17·9			45·5	27·8
57	Madras, South	Pamban	37	29·883		29·847	30·097	29·719	·378	·131	82·3	89·4		76·8		83·1		12·6	94·8	71·2	23·6	16·5
		Tinnevelly	168	29·760	P	29·858	29·971	29·590	·381	·144	82·4	94·3	0	76·9	+0·3	85·6	+0·3	17·4	104·5	67·9	36·6	25·0
		Madura	447	29·470	+·004	29·855	29·673	29·278	·395	·147	81·1	93·7	P	74·8	+1·2	84·3	P	18·9	102·5	65·1	37·4	27·3
		Periyakulam		28·980			29·184	28·778	·406	·145	77·6	91·5		70·6		80·1		21·0	102·3	58·0	44·3	32·0
31	Madras, South Central.	Salem	940	29·002	−·005	29·887	29·224	28·797	·427	·151	78·8	93·7	+1·0	72·2	+2·0	83·0	+1·5	21·5	105·7	55·0	50·7	32·1
		Coimbatore	1,348	28·582	+·007	29·883	28·776	28·374	·402	·144	76·2	90·1	P	71·1	+1·5	80·6	P	19·0	102·4	57·2	45·2	28·4
35	Coorg	Mercara	3,781	26·245	+·014		26·401	26·019	·382	·130	65·8	76·5	+0·2	62·2	+1·2	69·4	+0·7	14·3	90·0	52·1	37·9	23·0

I—*contd.*

at 218 stations in India, Burma, etc., in the year 1901—contd.

Wind direction. Number of winds from									Wind velocity.				Hygrometry 8 A.M.			Rainfall.						Station.	Meteorological Province or District.	Number of District.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Mean humidity of year.	Mean vapour tension of year.	Mean cloud amount of year.	Number of rainy days of year.	Normal number of rainy days during year.	Variation.	Rainfall of year.	Normal rainfall of year.	Variation from normal.	Heaviest rainfall during year.			
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
																			36·46	41·18	−4·34		IX.—Deccan		
79	19	26	40	20	11	79	79	12	13·2		15·7	−16	73	·566	5·3	95	83·30	+11·70	58·05	48·73	+ 9·32	4·00	Belgaum . .	Bombay, Deccan.	38
8	20	48	34	62	4	61	38	86	10·6	9·8	8·9	+10	57	·527	4·4	38	50·59	−12·59	24·92	33·73	− 8·81	5·23	Sholapur.*		
53	4	9	28	17	6	71	116	61	10·8	12·2	10·0	+22	64	·513	4·1	54	49·04	+ 4·96	28·66	28·67	− 0·01	2·38	Poona .		
137	7	8	16	18	6	55	85	33					67	·582	3·6	33	43·93	−10·93	17·84	16·18	+ 1·66	2·95	Bijapur.		
	19	24	7	3	17	52	177	66	8·0	9·3	7·2	+29	53	·486	3·1	32	40·25	− 8·25	16·98	25·49	− 8·51	2·87	Malegaon. .	Khandesh.	40
44	55	21	9	30	24	41	54	87	7·6	9·2			62	·528	3·9	34			16·93	23·53	− 6·60	1·97	Ahmednagar.		
75	2	23	44	18	6	37	76	84	6·6	7·1	5·5	+29	59	·525	4·0	47	50·33	− 3·33	26·69	37·69	−11·00	3·58	Akola . . .	Berar.	41
	26	76	49	17	16	57	94	30	8·6	7·6	4·7	+62	60	·556	4·1	44	50·50	− 6·50	28·92	37·25	− 8·33	3·30	Amraoti.		
71	1	14	43	20	12	15	96	93	6·9		5·4	+28	57	·502	3·7	39	44·22	− 5·22	17·07	33·16	−16·09	1·90	Khandwa . .	Central Provinces West.	42
4	1	146	1	15		168		26	4·5	4·6	3·0	+53	63	·536	3·3	58	60·13	− 2·13	45·50	56·48	−10·98	4·30	Hoshangabad.		
117	49	35	12	13	20	35	52	32	6·4		6·4	0	64	·562	4·6	63	64·63	−1·63	37·62	50·75	−13·13	3·50	Nagpur.		
117	26	20	22	23	18	38	75	26	2·9		3·7	−22	67	·612	5·1	62			55·08	58·41	− 3·33	6·82	Chanda . .	Central Provinces Central.	43
	68	66	17	17	41	50	55	51	4·6		3·9	+18	64	·516	3·4	79	73·64	+ 5·36	52·54	58·74	− 6·20	2·64	Seoni.		
31	16	26	12	72	67	18	63	30	3·4		3·3	+ 3	70	·551	3·2	61	65·31	− 4·31	57·16	60·32	− 3·16	5·44	Jubbulpore.		
	15	32	53	66	28	30	124	16	6·1	6·9	3·5	+97	59	·518	2·9	56	57·00	− 1·00	49·97	48·87	+ 1·10	4·57	Saugor.†		
36	3	17	37	10	7	42	105	80	4·8	5·2	6·1	−15	62	·516	3·7	55	52·90	+ 2·10	42·74	46·49	− 3·75	2·79	Sutna . . .	Central India.	49
126	21	32	18	9	8	106	28	16	6·5	6·0	5·6	+ 7	67	·588	4·5	75	65·04	+ 9·96	50·68	52·42	− 1·74	3·06	Raipur†. . .	Central Provinces, East.	44
	59	80	38	20	24	67	44	33	4·0	3·9	2·3	+70	73	·676	2·5	71			64·80	67·95	− 3·15	9·49	Sambalpur.		
126	6	26	8	23	1	67	2	103	6·8	6·5			72	·677	3·7	60			46·86	37·33	+ 9·53	3·85	Indur.‡	Hyderabad, North	39
10	41	33	43	26	12	136	36	28	9·2	7·7			69	·611	1·7	52			26·84	41·95	−15·11	2·33	Bidar.		
54	33	43	51	16	25	43	57	43	10·5	10·1			67	·638	3·9	46			20·69	28·79	− 8·10	2·16	Gulbarga . .	Hyderabad, South	53
24	17	11	42	71	15	95	40	50	9·9	9·7			66	·626	3·4	52			35·46	28·13	+ 7·33	4·65	Raichur.		
167	4	5	24	22	4	2	128	9	5·6	5·4			70	·617	4·1	57			30·99	33·62	− 2·63	1·66	Hyderabad (Dn.)		
32	28	55	61	39		24	73	53	7·3		6·5	+12	71	·610	3·7	54			31·22	33·62	− 2·40	1·92	Secunderabad.		
81	23	1	3	75	42	18	80	42	9·0	7·6			70	·664	5·0	52			27·22			2·22	Hanumkonda.		
																			98·93	103·03	−4·10		X.—West Coast.		
4	39	86	64	24	17	32	74	25	10·4		12·2	−15	78	·772	4·6	68	76·57	− 8·57	75·32	94·09	+ 1·23	5·68	Bombay . .	Konkan.	37
92	24	26	63	37	5	17	59	42	5·4	5·4	10·2	−47	74	·733	4·7	96	97·63	− 1·63	79·31	111·62	−32·31	3·05	Ratnagiri.		
45	32	33	72	35	19	16	75	38	9·4				82	·820	4·7	95			98·40	91·80	+ 6·60	11·66	Mormugao.		
8	35	89	102	3	15	28	56	26					80	·789	5·5	92			108·12	103·29	+ 4·83	10·10	Goa.		
76	66	50	68	7	5	23	56	13	4·7				81	·746	4·3	93	108·99	−15·99	134·49	129·17	+ 5·32	13·76	Karwar.†		
49	106	95	11	2	2	14	39	47	5·5				82	·834	5·6	135	131·30	+ 3·70	102·97	116·37	−13·40	4·76	Cochin . . .	Malabar.	33
63	44	92	56	33	6	9	13	49	7·8	9·9			84	·817	5·4	124	113·39	+10·61	119·79	112·79	+ 7·00	4·35	Calicut.		
113	19	19	80	69	7	5	23	30	2·8		3·4	−18	81	·812	5·7	114	118·30	− 4·30	113·94	122·71	− 8·77	5·40	Mangalore.		
89	95	41	33	10		3	16	78	5·5				82	·795	5·8	93			57·98	65·41	− 7·43	5·41	Trivandrum.		
																			36·94	36·64	−0·17		XI.—South India.		
3	15	57	37	43	20	109	21	20	10·2	10·8			81	·894	2·9	46	35·30	+10·70	43·68	38·20	+ 5·48	4·27	Pamban . .	Madras, South.	57
	89	36	5	7	7	24	81	116	5·7	5·2			72	·800	4·4	52	42·20	+ 9·80	25·00	29·09	− 4·09	1·56	Tinnevelly.		
70	91	50	17	19	7	18	8	85	2·6	2·6	4·2	−38	73	·777	4·8	60	43·15	+16·85	38·24	32·75	+ 5·49	3·52	Madura.		
																						3·30	Periyakulam . .		
217	42	12	15	19	14	9	19	18	2·5	2·8¶			73	·690	4·7	66			37·80						
120	4	41	53	2	18	78	45	4	4·6	4·1	4·4	− 7	75	·748	4·9	61	65·42	− 4·42	40·47	41·31	− 0·84	4·07	Salem . . .	Madras, South, Central.	34
1		46	120	2	14	78	103	1	4·7‖	4·2‖	4·8	−13	83	·758	5·8	49	44·15	+ 4·85	25·34	21·16	+ 4·18	2·18	Coimbatore.		
108	14	53	65		1	4	84	36	5·5	5·1	5·8	−12	89	·575	7·7	131	136·70	− 5·70	118·66	129·18	−10·52	3·96	Mercara . .	Coorg.	35

* Wind observation of 361 days. † Wind observation of 364 days. ‡ Wind observation of 362 days. § Mean of 9 months. ‖ Mean of 11 months. ¶ Mean of 10 months.

Table

Abstract of observations taken at 8 A. M.

Number of District.	Meteorological Province or District.	Station.	Elevation of Bar Cistern above sea-level in feet.	Pressure 8 A.M. in inches.							Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity 45° Lat.	Highest pressure recorded during year.	Lowest pressure recorded during year.	Absolute range during year.	Mean monthly range of pressure.	Mean of 8 A.M. of year.	Mean maximum of year.	Variation from normal of year.	Mean minimum of year.	Variation from normal of year.	Mean daily temperature of year.	Variation from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.	Absolute range during year.	Mean monthly absolute range.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
36	Mysore	Chitaldroog	2,405	27·526	+·001	29·858	27·736	27·276	·460	·147	74·3	87·4	+1·0	68·5	+1·3	78·0	+1·2	19·9	102·7	54·9	47·8	23·2
		Bangalore	3,021	26·949	+·001	29·880	27·142	26·744	·398	·136	70·6	84·9	+1·1	65·0	+1·2	75·0	+1·1	19·9	97·8	51·9	45·9	29·2
		Hassan	3,091	26·888		29·889	27·098	26·657	·441	·141	72·2	82·9		63·5		73·2		19·3	97·9	47·0	50·9	29·7
		Mysore	2,518	27·444	+·008	29·891	27·635	27·229	·406	·142	73·0	87·0	+0·7	66·7	+0·8	76·8	+0·8	20·3	100·1	51·9	48·2	29·2
56	Madras, East Coast, South.	Negapatam	31	29·880	−·003	29·840	30·087	29·683	·404	·152	82·4	90·9	+1·5	76·8	+1·1	83·9	+1·3	14·2	104·1	68·5	35·6	23·7
		Cuddalore	12	29·902	?	29·844	30·137	29·687	·450	·169	80·8	91·0	+0·6	75·6	+1·2	83·3	+0·9	15·4	106·2	61·7	44·5	25·4
		Trichinopoly	255	29·671	+·002	29·860	29·881	29·472	·409	·149	80·5	95·0	+1·0	75·3	+1·5	85·1	+1·2	19·7	107·7	61·4	46·3	30·5
		Madras	22	29·887	−·002	29·840	30·143	29·640	·503	·175	81·9	91·6	+0·8	75·6	+0·9	83·6	+0·9	16·0	108·5	59·5	49·0	26·1
		Vellore	707	29·204		29·860	29·452	28·965	·487	·160	79·1	93·4		73·6		83·5		19·8	105·8	59·9	45·9	30·7
55	Madras, East-Coast, Central.	Nellore	71	29·836	+·015	29·840	30·115	29·562	·553	·188	81·8	94·1	0	76·2	+1·1	85·2	+0·6	17·9	110·3	64·1	46·2	28·4
		Masulipatam	15	29·888	+·018	29·838	30·189	29·603	·586	·202	81·0	90·6	+0·2	75·2	+1·0	82·9	+0·6	15·4	110·7	60·2	50·5	26·6
54	Madras, Central	Cuddapah	433	29·474	+·006	29·847	29·737	29·212	·524	·173	82·2	96·4	+2·0	75·6	+1·4	86·0	+1·7	20·8	109·8	56·8	53·0	33·3
		Kurnool	924	28·974	0	29·849	29·242	28·708	·534	·179	77·1	94·3	+1·1	71·8	+1·7*	83·1	+1·5*	22·5	109·3	49·7	59·6	34·6
		Bellary	1,475	28·437	+·011	29·864	28·682	28·186	·497	·163	78·0	94·0	+1·0	72·1	+1·7	83·1	+1·4	21·9	109·0	55·1	53·9	32·6
52	Madras, East-Coast, North.	Cocanada	26	29·862	+·018	29·822	30·166	29·558	·608	·212	80·2	89·2	+0·2	75·5	+0·7	82·4	+0·4	13·8	111·0	60·5	50·5	25·1
		Waltair (Vizag.)	226	29·650	+·012	29·818	29·982	29·309	·673	·235	80·5	87·3	0	75·8	+0·3	81·6	+0·2	11·4	99·9	63·4	36·5	21·5
		Gopalpur	21	29·840	+·011	29·801	30·171	29·442	·729	·242	78·7	86·7	+0·9	72·3	+0·2	80·1	+0·6	13·4	101·8	56·1	45·2	22·8
	XII.—Hill Stations.		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
48	Baluchistan	Pishin										75·6		?		?		?	101·4	?	?	?
		Quetta	5,502	24·641	+·025		24·865	24·273	·592	·259	56·0	74·5	+1·2	42·7	−1·8	58·6	−0·3	31·8	100·1	17·3	32·8	50·9
		Kalat									56·0	73·8		35·6		54·7		38·3	100·3	0·4	99·9	60·7
		Chaman	4,311	25·681*	+·022*		25·952	25·270	·682	·270	64·0	79·1	0	52·5	−0·6	66·3	−0·3	25·6	107·2	23·1	84·1	47·3
30	Punjab and North-West Frontier Province.	Leh	11,503	19·728	+·029		19·996	19·302	·694	·241	36·3	52·1	−3·8	23·1	−1·8	41·5	−2·8	25·0	83·2	−8·5	91·7	42·5
		Srinagar	5,204	24·898	+·014		25·169	24·522	·647	·324	49·2	66·9	+1·0	44·1	+0·3	55·6	+0·7	22·8	94·9	19·1	75·8	39·4
		Skardu		22·895			23·245	22·490	·755	·396	45·1	62·0		39·4		50·7		22·6	96·6	−7·9	107·5	42·3
		Dras		20·818			21·085	20·404	·681	·359	32·2	51·8		19·8		35·8		32·0	89·5	−33·9	123·4	55·7
		Gilgit		25·155			25·555	24·611	·944	·436	58·7	72·8		52·3		62·6		20·5	108·3	24·5	84·3	41·8
		Chitral		24·550			24·850	24·300	·550	·251	54·0	76·1		49·4		62·8		26·7	108·2	26·0	82·2	44·2
		Killa Drosh									55·7	76·5		51·1		63·8		25·4	104·2	23·8	80·4	42·3
		Para Chinar	6,000								58·3	70·2		46·2*		57·4*		22·3*	97·1	12·7	84·4	39·8
		Cherat		25·694	+·027		25·960	25·333	·627	·302	61·3	74·1	−0·3	57·8	+0·4	66·3	+0·1	16·3	100·4	28·9	72·4	36·2
		Murree	6,333	23·837	+·019		24·051	23·442	·609	·295	56·2	64·0	−1·8	50·9	+0·2	57·5	−0·8	13·1	92·9	27·0	65·9	32·4
		Poo										62·0		40·8		51·5		21·2	88·5	10·5	78·0	37·9
		Simla	7,224	23·108	+·016		23·281	22·852	·429	·240	53·3	60·6	−0·9	49·6	−0·4	55·1	−0·7	11·0	84·4	24·2	60·2	26·4
25	United Provinces	Chakrata	7,022	23·266	+·012		23·448	22·974	·474	·231	53·7	63·4	−0·9	49·3	−0·1	56·4	−0·5	14·1	85·3	25·8	59·5	29·5
		Mussooree	6,705	23·546	+·013		23·735	23·280	·455	·240	55·4	63·1		51·3		57·2		11·8	88·8	26·5	62·3	28·1
		Ranikhet	6,069	24·092	+·019		24·307	23·801	·506	·231	58·0	67·8	+0·1	52·6	+0·5	60·7	+0·3	14·2	90·1	29·5	60·6	29·0
		Muktesar		22·843			23·013	22·585	·428	·228	54·4	64·6		48·2		56·4		16·3	87·4	25·9	61·5	31·6
13	Bengal	Yatung	10,480?									54·0		33·8*		43·3*		18·3	70·1	9·9	60·2	33·2*
		Darjeeling	7,376	22·004	+·007		23·182	22·780	·402	·220	53·3	60·0	+0·9	48·6	+0·9	54·3	+0·9	11·4	72·2	28·4	43·8	21·4
		Gangtok	5,660	24·436			24·584	24·205	·379	·111	56·8	68·3		36·0*		52·3*		32·5*	80·2	17·0	63·2	42·6

* Mean of 11 months.

I—*contd.*

at 218 stations in India, Burma, etc., in the year 1901—contd.

Wind direction. Number of winds from									Wind velocity.				Hygrometry 8 A.M.			Rainfall.						Heaviest rainfall during year.	Station.	Meteorological Province or District.	Number of District.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentage variation.	Mean humidity of year.	Mean vapour tension of year.	Mean cloud amount of year.	Number of rainy days of year.	Normal number of rainy days during year.	Variation.	Rainfall of year.	Normal rainfall of year.	Variation from normal.				
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
9	9	20	58	39	10	78	100	42	8·6	7·4			74	·629	5·6	48			21·15	25·12	− 3·97	1·91	Chitaldroog.	Mysore.	36
7	3	30	75	34	17	84	97	18	9·1	7·9	5·2	+52	78	·591	5·5	68	61·32	+ 6·68	27·00	25·79	+ 1·21	3·89	Bangalore.		
6	7	45	66	52	13	42	84	50	3·6	3·2			74	·583	6·2	65			33·46	30·00	+ 3·46	3·46	Hassan.		
4	15	45	43	25	17	114	79	23	8·1	9·0			76	·617	6·9	52			32·43	28·75	+ 3·68	1·89	Mysore.		
43	13	66	12	15	17	93	58	43	9·6	8·4	5·6	+ 50	76	·848	4·8	57	59·14	− 2·14	42·00	55·04	−13·04	3·37	Negapatam	Madras, East-Coast, South.	56
319	12	1	4		5	8	9	7	0·8	1·0			78	·824	5·8	64	56·70	+7·30	50·20	49·05	+ 1·15	3·34	Cuddalore.		
162	15	38	2	2	4	35	86	21	4·6		5·8	− 21	74	·769	4·2	46	44·41	+ 1·59	32·29	32·90	− 0·61	2·99	Trichinopoly.		
2	65	24	25	11	68	66	86	18	6·6		7·1	− 7	75	·813	5·0	65	62·00	+ 3·00	59·84	49·76	+10·08	10·30	Madras.		
186	4	12	6	11	27	80	16	22					78	·770	4·0	52			45·86			5·62	Vellore,†		
30	26	6	7	24	75	7	62	128	6·2				74	·796	5·5	46	42·80	+ 2·20	34·54	33·91	+ 0·63	2·95	Nellore	Madras, East Coast, Central.	55
42	67	34	8	33	34	17	55	75	7·8		7·0	+ 11	81	·862	5·4	55	54·39	+ 0·61	37·74	43·26	− 5·52	4·40	Masulipatam.		
	4	65	31	74	3	31	84	73					65	·716	4·3	51	45·80	+ 5·20	26·98	34·13	− 7·15	2·03	Cuddapah	Madras, Central.	56
197	24	1	13	7	7	10	59	47					67	·627	4·6	48	48·23	− 0·23	27·71	29·98	− 2·27	3·20	Kurnool.		
81	4	7	22	43	18	14	96	80	7·2	7·7	6·5	+ 18	56	·526	6·3	44	34·85	+ 9·15	21·06	19·70	+ 1·36	2·22	Bellary.		
57	39	60	5	8	7	98	48	43	8·4	7·0			78	·809	5·4	65	54·80	+10·20	45·68	44·58	+ 1·10	4·49	Cocanada	Madras, East Coast, North.	52
26	39	55	12	8	4	41	162	18	11·1				71	·746	5·6	53			47·29	45·78	+ 1·51	3·99	Waltair (Vizag.).		
15	90	11	5	4	41	102	7	90	12·8	12·6	9·6	+ 31	80	·792	2·2	50	60·97	−10·97	43·93	49·25	− 5·32	6·55	Gopalpur.		
...	...	...	...	...	...	...	...	...	...			...	...	...	...	...	...	...	...	...	...	...	**XII.—Hill Stations.**		
																14			4·40	10·44	− 6·04	0·65	Pishin.	Baluchistan.	48
342		1	1	2	7	2	5	5	1·4	1·5	4·1	− 63	59	·280	1·5	14	25·54	−11·54	5·00	10·97	− 5·97	0·79	Quetta.		
17	44		56		232		9		4·8**	24·7**						17			7·19	9·10	− 1·91	0·90	Kalat.‡		
18	12	6	79	98	39	81	16	16	5·6	5·9			54	·322	1·2	13			3·95	7·03	− 3·08	0·60	Chaman.		
1	8	114	97	13	53	49	24	6	2·7				48	·123	4·2	11			3·11	3·10	+ 0·01	0·33	Leh	Punjab and North-West Frontier Province,	20
121	14	8	16	70	73	12	20	31	3·3	3·5			88	·357	4·5	58			24·39	35·24	−10·85	1·50	Srinagar		
219	20	27	16		8	37	30	8	4·7	5·8			71	·223	4·6	16			5·01	13·32	− 8·31	0·84	Skardu.		
316	1		2	3	2	21	18	2	3·2	3·3			73	·154	4·2	61			21·94	24·25	− 2·31	1·78	Dras.		
324	2	1	1	2		18	16		2·1	2·0			47	·233	4·7	16			4·79	4·10	+ 0·69	0·62	Gilgit.†		
87	82	9	19	14	20	3	122	7					64	·287		25			12·32			1·07	Chitral.§		
198	15	14	38	22	24	21	43	12					60	·286	2·3	37			17·70			2·00	Killa Drosh.		
6	132	46	29	16	9	13	39	72	3·2*				53	·266	3·3*	57			26·55			2·35	Para Chinar.‖		
2	105	61	1	34	21	30	8	103	9·8	9·1			48	·274	2·2	40			35·09	26·16	+ 8·93	7·70	Cherat.		
261	15	7	5	47	21	1	1	7	3·7	4·6	6·8	− 32	58	·276	3·1	60	67·56	− 7·56	53·96	56·29	− 2·33	4·08	Murree		
274	5	10	12	13	2	18	18	12							3·4	28			11·33	18·56	− 7·23	1·37	Poo.†		
96	90	35	15	34	38	2	2	45	4·4		2·2	+100	56	·244	3·7	77	84·52	− 7·52	72·19	64·19	+ 8·00	3·94	Simla.		
69	157	20	6	47	53	5	2	6	9·3		5·1	+ 84	62	·275	3·4	86			74·96	67·76	+ 7·20	5·53	Chakrata.	United Provinces.	25
61	63	17	27	85	20	5	22	65					62	·294	3·3	94	79·73	+14·27	105·95	97·95	+ 8·00	6·33	Mussooree.		
162	10	32	29	27	1	38	35	31	2·9	3·3	2·1	+ 57	66	·335	3·5	81	77·29	+ 3·71	51·36	54·44	− 3·08	3·30	Ranikhet.		
13	7	17	24	113	23	20	16	132	6·5	6·0			61	·275	3·3	84			56·86			4·56	Muktesar.		
																127			49·04			1·66	Yatung	Bengal.	13
117	9	43	51	49	9	33	35	17	4·2	4·0	3·4	+ 18	86	·368	5·9	105	125·46	−20·46	108·54	121·70	−13·16	4·96	Darjeeling. §		
198	9	55	16	23	14	49	1	17	?	?			82	·401	5·4	162			131·44	143·89	−12·45	3·26	Gangtok¶		

** Mean of 10 months.
† Wind observations of 364 days.
‡ „ „ „ 358 „
§ Wind observations of 363 days.
‖ „ „ „ 362 „
¶ „ „ „ 332 „

Table

Abstract of observations taken at 8 A.M.

Number of District.	Meteorological Province or District.	Station.	Elevation of Bar Cistern above sea-level in feet.	Pressure 8 A.M. in inches.							Temperature of air.											
				Mean actual pressure (reduced to 32°).	Variation from normal.	Mean pressure reduced to sea-level and to constant gravity 45° Lat.	Highest pressure recorded during year.	Lowest pressure recorded during year.	Absolute range during year.	Mean monthly range of pressure.	Mean of 8 A.M. of year.	Mean maximum of year.	Variation from normal of year.	Mean minimum of year.	Variation from normal of year.	Mean daily temperature of year.	Variation from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.	Absolute range during year.	Mean monthly absolute range.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	Central India.	Mount Abu	3,945	26·021	−·009		26·272	25·676	·596	·224	68·2	76·8	+0·6	63·0	+1·2	69·9	+0·9	13·8	98·2	36·0	62·2	27·9
		Pachmarhi	3,528	26·436	+·011		26·683	26·129	·554	·187	69·6	79·9	+0·9	61·3	+0·3	70·6	+0·6	18·7	102·7	37·8	64·9	32·4
	South India	Wellington	6,200	24·260	+·001		24·395	24·082	·313	·122	62·2	71·7	+1·0	52·9	+0·1	62·8	+0·6	17·8	80·7	36·7	44·0	29·3
		Kodai Kanal	7,688	22·838			22·937	22·690	·247	·113	57·1	64·1		51·2		56·4		12·9	73·6	39·1	34·5	21·5
	XIII.—Extra India.																					
	Ceylon	Trincomalee	12	29·914	+·019	29·852	30·088	29·743	·345	·141	81·0	89·1	?	76·9	+0·9	83·0	?	12·2	97·5	67·5	30·0	18·8
		Colombo	40	29·907	−·001	29·873	30·028	29·784	·244	·125	80·3	88·5	+1·7	75·6	+0·2	82·0	+1·0	12·9	94·0	69·0	25·0	19·5
	Persia	Meshed	3,104								56·5			46·8						9·0		
		Teheran		25·989			26·325	25·440	·885	·369	60·4	74·2		49·4		61·8		24·9	107·6	13·0	94·6	48·9
		Ispahan		24·333			24·600	24·000	·600	·331	58·7	77·5		46·9		62·2		30·6	104·5	13·7	90·8	49·1
		Bushire	14	29·875	+·017	29·848	30·367	29·360	1·007	·261	75·6	83·3	+0·8	70·2	+1·9	76·8	+1·4	13·1	107·5	41·3	66·2	28·8
		Jask		29·873	+·010		30·330	29·345	·985	·275	79·4	87·2	+0·7	74·0	+0·6	80·6	+0·7	13·2	104·3	47·3	57·0	25·9
		Muscat	20	29·861		29·829	30·257	29·369	·888	·248	80·6	83·2		78·3		80·8		4·9	106·6	62·5	44·1	17·6
	Arabia	Baghdad	220	29·788	−·013	29·988	30·406	29·278	1·128	·386	69·4	90·2	+4·5	62·0	+3·1	76·2	+3·8	28·3	119·4	30·9	88·5	47·8
		Bussrah		29·930			30·481	29·413	1·068	·337		86·7		67·6		77·1		19·1	113·2	34·5	78·7	36·9
		Aden	94	29·836	+·005	29·861	30·106	29·534	·572	·165	81·2	87·7	−1·1	78·1	+0·8	82·9	−0·2	9·6	98·3	66·9	31·4	18·8
		Perim	201	29·710		29·844	30·014	29·381	·633	·171	83·2	89·9		79·7		84·8		10·3	105·0	69·4	35·6	18·1
	Afghanistan	Kabul									49·3	72·1		40·7		56·4		31·5	105·1	2·4	102·7	51·3
	Central Asia	Kashgar	4,255	25·637*			26·230	25·271	·959	·463	48·0	65·5		41·5		53·5		24·0	103·8	4·7	99·1	46·5
	Arabian Sea Islands.	Amini Devi*	13	29·928		29·869	30·077	29·649	·428	·154	83·7	87·6		77·2		82·4		10·4	96·0	67·4	28·6	18·2
	Africa	Zanzibar	73	30·003	+·010	30·003	30·178	29·835	·343	·131	78·2	83·2		76·0		79·6		7·1	91·0	69·6	21·4	13·0
		Do. Dunga		29·932			30·129	29·761	·368	·150	76·0	86·3		68·1		77·3		18·2	97·1	58·9	38·2	26·1

* Mean of 11 months.

† Wind observations of 364 days.

Note.—When a query is inserted against any reading or in the variation returns of any

I—*concld.*

at 218 stations in India, Burma, etc., in the year 1901—concld.

Wind direction. Number of winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind velocity. Mean velocity in miles per hour, by anemometer (uncorrected).	Mean velocity corrected (where possible).	Normal.	Percentag evariation.	Hygrometry 8 A.M. Mean humidity of year.	Mean vapour tension of year.	Mean cloud amount of year.	Rainfall. Number of rainy days during year.	Normal number of rainy days during year.	Variation.	Rainfall of year.	Normal rainfall of year.	Variation from normal.	Heaviest rainfall during year.	Station.	Meteorological Province or District.	Number of district.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
50	34	58	4	13	14	131	34	27	8·8	9·1	7·0	+30	52	·357	3·3	39	53·51	−14·51	19·27	66·98	−47·71	1·97	Mount Abu	Central India.	
157	19	8	16	21	13	21	43	67	6·8	7·0	5·2	+35	62	·444	4·1	75	80·46	−5·46	85·21	78·18	+ 7·03	5·03	Pachmarhi.		
227	18	34	11	12	5	45	3	10	2·8		3·3	−15	72	·411	5·2	104	87·15	+16·85	62·12	52·73	+ 9·39	3·90	Wellington	South India.	
10	33	68	47	41	10	5	28	123	13·0				71	·334	4·5	119			66·29			3·74	Kodai Kanal.		
																							XIII.—Extra India.		
88	1	36				231		9	7·6				85	·900	2·9	73			57·33	76·01	−18·68	3·45	Trincomalee	Ceylon.	
7	34	38	63	35	28	105	47	7	7·9		7·6	+4	86	·891	4·6	118			74·87	90·13	−15·26	3·68	Colombo.†		
													65	·336	2·3	18			7·41	8·44	−1·03	1·04	Meshed	Persia	
16	55	122	27	13	17	48	4	19	1·5	1·9			46	·254	1·8	17			5·06	9·81	−4·75	0·63	Teheran.‡		
									1·8	2·3			53	·274	1·6	14			3·92	4·78	−0·86	0·61	Ispahan.		
48	48	83	40	44	9	9	3	83	7·3	8·7	8·45	+7	67	·627	1·7	8			4·07	12·30	−8·23	1·40	Bushire.		
62	43	25	134	22	2	4	6	59	11·5	13·3			77	·816	1·4	1			0·60	4·75	−4·15	0·60	Jask.‖		
47	3	13	9	136	1	45	28	81	4·3	4·5			69	·740	1·6	7			2·10	5·96	−3·86	0·90	Muscat¶		
139	84	16	3	6	14	6	11	74	2·6	3·5			53	·379	1·8	5			1·47	10·31	−8·86	0·35	Baghdad**	Arabia.	
																9			5·64			1·05	Bussrah.		
76		156	55	37	5	32	1	3	11·4	11·0	11·5	−4	71	·772	4·2	7			2·19	3·67	−1·48	1·00	Aden.		
5	3	35	119	109	7	29	33	21	18·7	17·0			79	·905	2·7	13			3·47	1·69	+1·78	0·90	Perim.††		
	67	25	12	38	34	37	81	71					57	·209	1·1*	19			8·10	11·30	−3·20	2·10	Kabul	Afghanistan.	
202	26	3	14	9	22	6	13	6	4·6	4·1					3·4	8			4·50	4·21	+0·29	1·30	Kashgar ‡‡	Central Asia.	
5	92	34	9	9	3	31	63	88					75	·865	5·1	77			38·94			4·80	Amini Devi	Arabian Sea Island.	
8	35	52	17	36	126	82	5	4	7·2	6·8			85	·824	6·5	102			73·77	52·87	+20·90	4·47	Zanzibar	Africa	
65	26	49	14	31	72	73	9	17	6·0	5·9			91	·820	5·6	125			87·75			6·35	Do. Dunga.§§		

station, the data for that station are not utilized in calculating the provincial variations.

‡ Wind observations of 321 days
§ Mean of 9 months.
‖ Wind observations of 357 days.
¶ Do. 363 „

** Wind observations of 353 days.
†† Do. 361 „
‡‡ Do. 301 „
§§ Do. 356 „

TABLE II.—Abstract of Observations taken at 10 A.M. and 4 P.M., at 65 Stations in India, Burma, etc., in the year 1901.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M.

Meteorological Provinces.	Station.	Elevation of bar-cistern above sea level in feet.	Pressure.						Temperature of air.									
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Burma Coast and Bay Islands.	Port Blair	61	29·870	29·773	·097	29·818	+·010	29·810	87·8	78·0	9·8	97·0	70·9	26 1	84·6	85·3	81·8	+1·1
	Rangoon	41	·862*	·741*	·121	·805*	−·806*	·783*	89·3	73·7	15·6	104·0	57·8	46·2	82·5	85·1	79·6	+0·8
	Diamond Island	41	·878	·778	·100	·825	−·010	·801	85·2	77·4	7·8	91·6	68·2	23·4	82·9	82·9	80·2	+1·3
	Cocos Island	111	·845	·756	·089	·798	P	·841	86·5	77·6	8·9	96·8	71·9	24·9	83·6	83·1	80·3	+1·4
	Akyab	20	·884	·776	·108	·830	−·006	·793	86·8	71·4	15·4	98·3	49·4	48·9	80·9	82·9	78·2	−0·2
Bengal and Orissa	Chittagong	87	·802	·696	·106	·748	−·009	·784	86·3	69·5	16·8	99·7	48·7	51·9	81·3	83·0	77·2	+0·8
	Calcutta (Alipore)	21	·849	·737	·112	·790	+·006	·757	87·8	70·9	16·9	103·4	50·1	53·3	81·9	85·3	78·8	+0·9
	Saugor Island	25	·845	·738	·107	·789	+·007	·758	86·1	73·7	12·4	99·4	50·0	49·4	81·5	83·5	78·8	+0·4
	False Point	21	·853	·750	·103	·802	−·002	·764	85·9	72·3	13·6	101·5	52·0	49·5	83·0	83·1	77·9	+0·2
Gangetic Plain and Chota Nagpur.	Hazaribagh	2,007	27·851	27·750	·101	27·800	+·005	·746	84·7	66·5	18·2	107·9	44·7	63·2	78·3	81·6	74·6	+0·7
	Darbhanga	166	29·696	29·572	·124	29·633	0	·753	86·6	68·7	17·9	103·3	45·8	57·5	80·2	85·1	76·9	+0·3
	Allahabad	309	·536	·416	·120	·472	−·007	·733	90·9	67·4	23·5	118·3	42·1	76·2	83·2	89·3	78·4	+0·5
Upper Sub-Himalayas.	Dehra Dun	2,233	27·625	27·540	·085	27·573	+·002	·769	81·3	60·3	21·0	107·8	38·5	69·3	73·1	77·3	69·6	−1·0
	Roorkee	887	28·952	28·851	·101	28·894	+·009	·750	86·5	61·7	24·8	114·7	37·1	77·6	77·3	84·2	73·2	−0·8
	Meerut	738	29·093	·992	·101	29·035	−·001	·740	88·5	63·8	24·7	114·8	41·4	73·4	78·3	85·5	75·2	+0·2
	Lahore	702	·130	29·043	·087	·079	+·005	·750	89·8	63·3	26·5	118·3	37·0	81·3	79·7	87·9	75·6	+1·9
	Ludhiana	812	·027	28·935	·092	28·974	+·012	·757	87·3	64·7	22·6	116·8	39·1	77·7	78·1	85·4	75·1	+1·1
Indus Valley and N.-W Rajputana.	Peshawar	1,110	23·753	·655	·098	·697	+·004	·794	85·7	59·2	26·5	117·0	33·1	83·9	77·0	82·9	71·3	+0·4
	Jacobabad	186	29·649	29·531	·118	29·583	0	·725	97·6	65·1	32·5	126·0	34·1	91·9	85·3	95·0	80·2	+1·2
	Kurrachee	30	·864	·769	·095	·814	+·010	·795	89·4	70·8	18·6	116·3	42·2	74·1	83·2	84·7	78·6	+1·3
Eastern Rajputana, Central India and Gujarat.	Jaipur	1,431	28·445	28·342	·103	28·388	+·011	·767	91·9	66·8	25·1	116·2	40·3	75·9	83·3	89·3	78·2	+2·0
	Udaipur	1,925	27·965	27·862	·103	27·914		·776	88·7	64·9	23·8	110·0	38·3	71·7	81·3	86·3	76·2	
	Deesa	466	29·416	29·296	·120	29·351	+·003	·766	95·8	68·8	29·0	116·9	38·0	78·9	86·1	93·9	81·9	+2·1
	Jamnagar	61	·841	·734	·107	·787		·794	91·1	68·6	22·5	108·6	43·4	65·2	84·0	88·2	79·1	
Deccan	Belgaum	2,539	27·384	27·281	·103	27·331	+·004	·771	84·1	64·9	19·2	100·1	43·4	56·7	77·7	80·4	73·2	+0·5
	Sholapur	1,590	28·314	28·178	·136	28·248	0	·761	93·3	69·4	23·9	109·5	49·2	60·3	83·7	90·3	80·2	+1·0
	Poona	1,840	·073	27·963	·110	·021	+·008	·783	90·0	61·7	25·3	108·1	42·1	66·0	81·4	86·9	76·5	+0·6
	Akola	930	·966	28·831	·135	·895	+·015	·770	93·2	66·6	26·6	116·3	42·5	73·8	83·9	91·5	79·6	+0·4
	Buldana	2,132	27·773	27·658	·115	27·712	+·009	·762	87·7	67·5	20·2	110·3	48·2	62·1	80·1	85·5	77·2	+0·1
	Khandwa	1,044	28·842	28·710	·132	28·773	+·008	·763	93·5	67·9	25·6	117·2	40·6	76·6	83·3	91·7	80·1	+1·9
	Nagpur	1,025	·853	·725	·128	·786	+·019	·758	92·1	69·2	22·9	115·6	49·4	66·2	82·4	89·1	80·0	+0·4
	Nagpur (Sanitary Commr.'s Office.)	1,013	·872	·742	·130	·804		·766	92·7	69·1	23·6	116·4	47·5	68·9	83·6	90·1	80·3	
	Hyderabad (Deccan)	1,690	·215	·093	·122	·153	+·009	·768	90·1	69·9	20·2	107·0	54·3	52·7	82·4	87·7	79·4	+0·8
West Coast	Bombay	37	29·889	29·787	·102	29·834	+·012	·811	86·3	75·4	10·9	98·4	58·4	40·0	81·1	83·0	80·0	+0·5
	Karwar	44							86·5	73·7	12·8	94·0	58·9	35·1	81·9	84·6	79·5	+0·8
South India	Periyakulam	945	28·980	28·852	·128	28·925			91·5	70·6	20·9	102·3	58·0	44·3	83·7	87·1	79·8	
	Salem	940	29·003	·862	·141	·941	−·009	29·807	93·7	72·3	21·4	105·5	55·2	50·3	84·4	89·3	81·2	+1·5
	Chitaldroog	2,405	27·530	27·414	·116	27·474	+·001	·776	87·4	68·5	18·9	103·0	54·9	48·1	79·6	84·7	77·3	+1·4
	Bangalore	3,021	26·955	26·842	·113	26·904	0	·791	85·0	65·0	20·0	98·0	52·1	45·9	76·8	82·0	74·3	+1·3
	Hassan	3.091	·894	·793	·101	·849	+·003	·802	82·9	63·5	19·4	97·9	47·0	50·9	77·1	79·5	72·4	+1·0
	Mysore	2.518	27·446	27·327	·119	27·387	+·002	·798	87·0	66·7	20·3	99·7	52·0	47·7	78·8	83·6	76·0	+1·0

* Mean of 10 months.

II.

at 65 Stations in India, Burma, etc., in the year 1901.

Temperature, Wet-bulb.				Vapour Tension.					Humidity.					Cloud.				Rainfall.		Station.	Meteorological Province.
Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Total rainfall for the year.	Heaviest rainfall during the year.		
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
75·3	79·3	79·2	77·9	·847	·937	·921	·902	+·019	88	79	76	81	0	5·7	6·3	6·0	+0·5	132·77	5·80	Port Blair.	Burma Coast and Bay Islands.
71·7	75·9	76·1	74·5	·761	·813	·771	·782	+·003	90	74	64	76	−1	5·8	6·5	6·2	+0·8	98·49	6·24	Rangoon.	
73·3	77·2	76·8	75·8	·764	·864	·843	·824	+·016	81	76	75	77	−2	4·8	5·1	5·0	−0·2	118·12	5·56	Diamond Island.	
73·6	77·4	76·9	76·0	·778	·862	·849	·830	+0·12	82	75	75	77	−2	5·0	5·2	5·1	+0·1	94·88	5·77	Cocos Island.	
?	75·2	76·3	?	?	·820	·828	?	?	?	76	73	?	?	4·6	4·7	4·7	+0·1	204·44	8·81	Akyab.	
68·2	74·2	74·6	72·3	·699	·766	·759	·741	−·009	94	70	67	77	−3	5·0	4·8	4·9	+0·3	85·05	6·70	Chittagong.	Bengal and Orissa.
68·8	74·0	73·9	72·2	·707	·759	·709	·725	−·011	90	68	58	72	−4	4·5	4·7	4·6	+0·3	70·11	5·54	Calcutta (Alipore).	
71·1	75·9	76·1	74·4	·760	·842	·828	·810	−·010	88	76	70	78	−2	5·2	5·0	5·1	+0·2	72·65	4·04	Saugor Island.	
71·0	76·2	76·2	74·5	·770	·831	·828	·810	+·014	94	72	72	79	−1	5·0	5·3	5·2	+0·4	57·55	8·86	False Point.	
61·0	65·4	66·0	64·1	·496	·488	·464	·483	−·001	73	51	45	56	−1	4·8	6·2	5·5	+0·8	43·15	3·17	Hazaribagh.	Gangetic Plain and Chota Nagpur.
66·0	71·7	72·4	70·0	·643	·692	·653	·663	−·008	87	66	54	69	−2	3·0	2·3	2·7	−0·2	39·75	4·01	Darbhanga.	
62·7	70·4	71·7	68·2	·550	·604	·568	·574	+·002	79	54	43	59	−2	3·2	3·8	3·5	+0·2	33·63	3·75	Allahabad.	
55·7	62·6	63·8	60·7	·421	·467	·455	·448	−·018	75	57	49	61	−2	3·4	3·9	3·7	−0·3	89·08	6·08	Dehra Dun.	Upper Sub-Himalayas.
57·6	65·8	66·6	63·3	·467	·513	·449	·476	−·019	79	55	40	58	0	2·5	2·3	2·4	−0·6	41·07	4·72	Roorkee.	
58·8	66·1	67·8	64·3	·476	·519	·476	·490	−·023	76	53	39	56	−2	2·8	2·7	2·8	−0·2	28·46	4·32	Meerut.	
58·0	66·4	68·8	64·4	·461	·505	·480	·482	−·003	73	50	38	54	+2	2·1	2·0	2·1	−0·6	17·96	5·72	Lahore.	
60·1	65·4	67·5	64·3	·505	·495	·472	·491	−·012	78	52	40	56	−2	2·4	2·7	2·6	−1·0	30·51	5·40	Ludhiana.	
53·6	63·3	64·8	60·5	·388	·456	·427	·424	−·001	71	48	38	52	0	2·1	3·2	2·7	−0·5	14·52	3·85	Peshawar.	Indus Valley and N.-W. Rajputana.
58·2	68·5	71·8	66·2	·452	·522	·518	·498	+·038	66	41	30	45	+2	1·7	1·9	1·8	−0·1	2·68	0·92	Jacobabad.	
65·7	72·3	74·6	70·9	·612	·675	·743	·677	+·007	75	58	61	65	−2	2·3	2·1	2·2	−0·9	1·37	0·54	Kurrachee.	
58·3	66·5	76·6	64·1	·420	·469	·427	·439	−·026	60	41	32	44	−5	2·9	4·0	3·5	−0·1	15·66	3·35	Jaipur.	Eastern Rajputana, Central India and Gujarat.
59·6	66·1	67·9	64·5	·486	·482	·481	·483		74	44	38	52		2·7	3·5	3·1		18·11	2·08	Udaipur.	
59·8	67·9	68·6	65·4	·443	·465	·383	·430	−·050	56	37	25	39	−6	2·7	2·7	2·7	−0·7	7·85	2·20	Deesa.	
63·7	70·4	71·2	68·4	·566	·592	·566	·575		74	48	41	54		1·9	1·7	1·8		4·01	1·12	Jamnagar.	
62·6	67·1	67·9	65·9	·550	·540	·535	·543	+·022	88	58	55	67	+3	4·8	6·0	5·4	+0·8	58·05	4·00	Belgaum.	Deccan.
62·3	68·6	69·5	66·8	·494	·523	·470	·496	−·003	66	46	35	49	−1	4·4	6·1	5·3	+0·5	24·92	5·23	Sholapur.	
61·2	66·4	67·7	65·1	·521	·476	·449	·482	−·003	82	45	38	55	+2	4·0	5·0	4·5	+0·1	28·66	2·38	Poona.	
61·5†	68·9	70·1	66·8†	·521†	·523	·462	·511†	+·002†	77†	46	34	54	0†	4·0	4·7	4·4	+0·6	26·69	3·58	Akola.	
59·8	65·5	66·1	63·8	·438	·461	·414	·438	−·028	63	46	36	49	−3	3·9	4·4	4·2	+0·1	43·65	5·10	Buldana.	
60·4	68·2	69·9	66·2	·467	·521	·469	·486	−·012	64	47	34	48	−3	3·5	4·1	3·8	+0·4	17·07	1·90	Khandwa.	
63·0	69·6	71·0	67·9	·526	·582	·545	·551	+·023	72	53	42	56	+2	4·4	5·7	5·1	+0·6	37·62	3·50	Nagpur.	
63·4	70·4	71·8	68·6	·544	·599	·569	·571		74	52	42	56		3·9	5·3	4·6		40·82	3·34	Nagpur (Sanv. Commr.'s Office).	
?	70·4	71·2	?	?	·602	·566	·597	?	?	55	45	59	?	4·2	5·0	4·6	+0·8	30·99	1·66	Hyderabad (Deccan).	
71·0	74·2	75·7	73·6	·716	·769	·802	·763	−·013	80	71	70	74	−3	4·1	4·1	4·1	−0·2	75·32	5·68	Bombay.	West Coast.
71·1	74·5	75·9	73·8	·736	·758	·783	·759	−·002	88	69	66	75	−3	3·7	3·7	3·7	0	134·49	12·76	Karwar.	
66·9	73·1	73·6	71·4	·646	·677	·650	·658		86	59	52	66		4·6	6·7	5·7		37·80	3·30	Periyakulam.	South India.
69·8	74·3	75·6	73·2	·704	·722	·704	·709	+·021	89	61	51	67	0	4·8	6·1	5·5	+0·9	40·47	4·07	Salem.	
64·4	70·0	70·6	68·3	·565	·618	·580	·588	+·081	80	62	51	64	+6	5·5	5·7	5·6	+0·6	21·15	1·91	Chitaldroog.	
62·8	67·5	67·6	66·0	·551	·572	·509	·544	+·010	89	63	49	67	0	4·8	5·6	5·2	+0·7	37·00	3·89	Bangalore.	
62·1	67·0	66·8	65·3	·546	·549	·515	·537	+·010	92	60	54	68	0	6·0	7·1	6·6	+0·6	33·46	3·46	Hassan.	
64·7	68·8	68·8	67·4	·594	·583	·525	·568	+·019	90	59	48	66	+1	7·2	7·2	7·2	+1·7	32·43	1·89	Mysore.	

† Mean of 11 months.

Table

Abstract of Observations recorded at 10 A.M. and 4 P.M.

Meteorological Province.	Station.	Elevation of Bar-Cistern above sea level in feet.	Pressure.						Temperature of air.									
			Mean of 10 hours.	Mean of 16 hours.	Mean daily range.	Mean daily pressure.	Variation from normal.	Mean reduced to S. L. and for gravity 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
South India—*contd.*	Madras	22	29·894	29·778	·116	29·840	+·001	29·791	91·5	75·5	16·0	108·5	59·5	49·0	86·8	86·3	82·3	+0·5
	Bellary	1,475	28·444	28·309	·135	28·379	0	·778	93·9	72·1	21·8	109·0	55·1	53·9	·84·0	90·0	81·6	+1·1
	Waltair	226	29·661	29·551	·110	29·606		·772	87·2	75·9	11·3	100·0	63·5	36·5	83·9	83·9	80·7	
Hill Station, Baluchistan.	Quetta	5,502	24·651	24·573	·078	24·605	+·021		74·6	42·8	31·8	100·2	17·5	82·7	66·2	71·5	57·9	−0·2
Hill Stations, Northern India.	Leh	11,503	19·723	19·634	·089	19·684	+·020		53·3	28·1	25·2	83·2	−8·5	91·7	43·8	50·1	40·2	−1·0
	Srinagar	5,204	24·908	24·824	·084	24·858	+·009		67·1	44·0	23·1	95·0	19·0	76·0	56·1	65·1	55·1	+0·7
	Kailang	10,087	20·962	20·883	·079	20·930	?		56·2	30·5	25·7	82·3	−3·0	85·3	45·5	49·6	40·7	−0·2
	Simla (Ridge)	7,224	23·130	23·081	·049	23·098	+·019		60·6	49·4	11·2	84·4	24·2	60·2	56·4	57·5	54·2	−1·4
	Chakrata	7,022	·289	·238	·051	·256	+·003		63·5	49·3	14·2	85·3	25·8	59·5	58·0	58·6	55·1	−0·7
	Ranikhet	6,069	24·113	24·043	·070	24·066	+·013		67·8	53·6	14·2	83·9	29·4	60·5	62·7	64·1	59·8	0
	Muktesar		22·868	22·806	·062	22·837			64·6	48·2	16·4	87·4	25·9	61·5	58·8	59·6	55·2	
	Katmandu	4,388	25·547	25·445	·102	25·495	?		77·8	54·1	23·7	93·2	30·2	63·0	68·6	72·2	64·6	−0·3
	Darjeeling †	7,376	23·014	22·951	·063	22·981	+·004		60·1	48·6	11·5	72·3	28·4	43·9	56·1	58·0	53·8	+1·1
Hill Stations, Central India.	Mount Abu	3,945	26·042	25·970	·072	26·002	−·010		76·8	63·1	13·7	98·2	36·0	62·2	72·1	74·7	69·4	+1·2
	Pachmarhi	3,528	·455	26·365	·090	·407	+·010		79·9	61·2	18·7	102·9	37·8	65·1	74·4	77·9	70·2	+0·6
	Chikalda	3,642	·337	·238	·099	·284	0		80·0	64·2	15·8	102·4	42·0	59·4	73·8	78·1	71·7	+0·5
Hill Station, South India.	Wellington	6,200	24·269	24·199	·070	24·235	+·010		71·7	53·9	17·8	80·8	33·6	47·2	67·7	66·7	61·6	+0·5
	Kodaikanal	7,688	22·853	22·784	·069	22·815			63·9	51·2	12·7	73·6	39·1	34·5	61·0	58·9	56·2	
Extra India	Aden	94	29·846	29·733	·113	29·786	+·012	·811	87·7	78·2	9·5	98·3	66·8	31·5	84·3	86·1	82·7	+0·6
	Perim	201	·715	·605	·110	·656	+·020	·789	89·9	79·7	10·2	104·3	69·4	34·9	86·1	86·9	84·0	+0·1
	Minicoy*	7	·963	·888	·075	·922		·854	87·0	?	?	98·0	?	?	84·5	84·1	?	
	Zanzibar	73	30·012	·906	·106	·959	+·016	·959	83·2	76·0	7·2	91·0	69·6	21·4	79·7	82·6	79·5	−0·1
	Port Victoria (Seychelles).	15	29·995	·904	·091	·950	+·005	·889	82·4	74·3	8·1	88·0	69·2	18·8	81·0	81·6	78·2	−1·2
	Mauritius (Pamplemouses).	181				·901	+·002	30·030				87·7	59·2	28·5			73·8	−0·1

* Mean of 10 months.

† Means of air temperature, wet bulb vapour tension and humidity are for 11 months.

II—*concld.*

at 65 Stations in India, Burma, etc., in the year 1901—concld.

Temperature, Wet-bulb.				Vapour Tension.					Humidity.					Cloud.				Rainfall.		Station.	Meteorological Provinces.
Mean minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	From minimum.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Mean 10 hours.	Mean 16 hours.	Mean daily.	Variation from normal.	Total rainfall for the year.	Heaviest rainfall during the year.		
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
	76·7	77·4	76·1	?	·787	·824	·825	+·041	?	62	66	75	+2	5·3	4·9	5·1	+0·2	59·84	10·30	Madras . .	South India—*concld.*
65·1	68·6	69·9	67·9	·541	·512	·486	·513	−·036	69	44	35	50	−4	6·4	7·6	7·0	+2·0	21·06	2·22	Bellary.	
69·2	74·6	75·1	73·0	·636	·746	·765	716		70	64	65	66		5·3	5·6	5·5		47·29	3·99	Waltair.	
39·6	51·0	52·9	47·8	·237	·240	·228	·235	−·015	79	38	31	49	0	1·5	2·4	2·0	−0·3	5·00	0·79	Quetta . .	Hill Station, Baluchistan.
23·8	32·5	36·1	30·8	·115	·121	·125	·120	−·015	62	33	30	42	−9	4·0	5·1	4·6	−0·9	3·12	0·33	Leh . .	Hill Stations, Northern India.
42·2	53·3	60·8	52·1	·281	·426	·546	·417	+·056	86	84	79	83	+6	3·9	4·7	4·3	−0·3	24·33	1·50	Srinagar.	
28·5	37·8	39·4	35·2	·162	·192	·177	·178	−·002	84	57	49	63	0	4·7	6·0	5·4	−0·2	18·40	2·32	Kailang.	
43·4	47·5	48·9	46·6	·240	·258	·280	·260	−·028	65	54	57	59	−2	4·1	4·9	4·5	−0·6	72·19	8·94	Simla (Ridge).	
44·6	49·9	50·6	48·3	·264	·298	·311	·291	−·011	70	58	60	63	−1	3·6	4·7	4·2	−0·5	75·01	5·53	Chakrata.	
48·3	53·5	54·4	52·1	·304	·338	·347	·330	−·015	70	58	56	62	−3	3·8	4·3	4·1	−0·3	51·36	3·30	Ranikhet.	
43·2	50·1	51·4	48·2	·247	·296	·319	·287		68	57	59	62	0	3·7	4·5	4·1		56·86	4·56	Muktesar.	
52·7	60·7	62·2	58·5	·417	·473	·470	·453	+·005	91	66	57	71	0	4·2	5·2	4·7	+0·1	47·49	2·29	Katmandu.	
47·1	53·1	54·5	51·6	·325	·391	·407	·374	+·015	89	82	81	84	−1	5·8	6·5	6·2	−0·5	108·54	4·96	Darjeeling.	
53·9	58·6	59·8	57·4	·329	·358	·362	·350	−·016	56	46	42	48	−5	3·2	3·5	3·4	−0·3	19·27	1·97	Mount Abu .	Hill Stations, Central India.
55·9	62·1	63·3	60·5	·412	·432	·429	·424	+·012	74	52	47	58	0	4·3	4·9	4·6	+0·5	85·21	5·03	Pachmarhi.	
57·4	62·0	63·8	61·1	·409	·432	·440	·427	−·005	67	54	49	56	−2	3·4	4·3	3·9	−0·5	59·97	5·91	Chikalda.	
51·7	59·4	59·8	57·0	·368	·427	·447	·414	+·022	86	63	69	73	+1	5·9	7·1	6·5	+0·8	62·12	3·90	Wellington .	Hill Station, South India.
47·0	54·4	55·2	52·1	·289	·363	·404	·350		75	68	82	76		5·6	7·3	6·5		66·29	3·74	Kodaikanal.	
71·4	75·2	74·4	73·7	·688	·763	·702	·717	−·023	71	64	56	64	−3	3·1	2·2	2·7	+0·2	2·21	1·00	Aden . .	Extra India.
78·9	79·0	79·0	77·6	·811	·912	·901	·875	+·116	80	73	71	74	+10	1·5	0·8	1·2	−0·9	3·47	0·90	Perim.	
?	77·9	77·6	?	?	·871	·863	?		?	74	74	?		4·8	5·5	5·2		57·45	3·25	Minicoy.	
71·9	75·5	75·6	74·3	·739	·826	·798	·787	−·005	81	82	72	78	0	7·0	5·6	6·3	+1·5	73·77	4·47	Zanzibar.	
72·3	75·6	75·6	74·5	·773	·818	·810	·801	+·013	91	77	75	81	+3	5·8	6·1	6·0	−0·2	103·32	5·15	Port Victoria (Seychelles).	
							·631	+·007				75	+1					56·47	12·22	Mauritius (Pamplemousses).	

Corrigenda in India Monthly Weather Reviews for the year 1901.

TEXT.

Page.	Column.	Part.	Correction.
9	2	January 1901 . .	*For* "slight" *read* "very slight" in the 5th line of paragraph 2.
9	2	Ditto ,, . .	*For* "+·031" and "+·022" *read* "+.001" and "—·008", respectively, against Darjeeling in figure columns 1 and 3 of the tabular statement.
9	2	Ditto ,, . .	*For* "western" *read* "ern" in the 3rd line of paragraph 3.
29	2	Ditto ,, . .	*For* "29th January" *read* "9th January" in the date column of the 2nd tabular statement.
73	2	February ,, . .	*Insert* "the weather was fine" after "India," in the 10th line of paragraph 1.
77	1	Ditto ,, . .	*For* "strongly" *read* "slightly" in the 15th line of paragraph 1.
82	1	Ditto ,, . .	*For* "0·087" *read* "0·057" in the 6th line of paragraph 1.
82	2	Ditto ,, . .	*For* "+·087" and "+·063" *read* "+·057" and "+·033," respectively, against Darjeeling in figure columns 1 and 3 of the tabular statement.
146	1	March ,, . .	From the 3rd line of paragraph 2, *omit* "the Sikkim Himalayas and".
146	2	Ditto ,, . .	*For* "+·097" and "+·035" *read* "+·067" and "+·005," respectively, against Darjeeling in the figure columns 1 and 3 of the tabular statement.
174	...	Ditto ,, . .	*For* "0·36" and "+0·18" *read* "0·37" and "+·019", respectively, against Bombay Deccan in the figure columns 3 and 5 of the tabular statement.
175	2	Ditto ,, . .	*For* "district" *read* "districts" in the 2nd line of paragraph 1.
177	2	Ditto ,, . .	Insert "1·70" against Kotgarh in the figure column of the 2nd tabular statement.
179	2	Ditto ,, . .	*For* "3 per cent." *read* "300 per cent." in the 4th line of paragraph 2.
207	2	April ,, . .	*For* "+·044" and "+·046" *read* "+·014" and "+·016", respectively, against Darjeeling in the figure columns 1 and 3 of the 2nd tabular statement.
211	2	Ditto ,, . .	*For* "·626" *read* "29·626" against Roorkee in the 1st figure column of the 1st tabular statement.
272	2	May ,, . .	*For* "+·069" and "+·062" *read* "+·039" and "+·032", respectively, against Darjeeling in the figure columns 1 and 3 of the tabular statement.
348	1	June ,, . .	*For* "n" *read* "in" in the 11th line of paragraph 3.
355	2	Ditto ,, . .	*Insert* "Darjeeling," before "Mount Abu" in the 7th line of the paragraph 1.
355	2	Ditto ,, . .	*For* "—·015" and "+·011" *read* "—·045" and "—·019", respectively, against Darjeeling in the figure columns 1 and 3 of the tabular statement.
392	...	Ditto ,, . .	*For* "26·87" and "—0·27" *read* "26·90" and "—0·24", respectively, against Konkan in the figure columns 3 and 5 of the tabular statement.
392	...	Ditto ,, . .	*For* "4·26" and "—1·43" *read* "4·27" and "—1·42", respectively, against Khandesh in the figure columns 3 and 5 of the tabular statement.
431	2	July ,, . .	*For* "+·021" and "+·040" *read* "—·009" and "+·010", respectively, against Darjeeling in the figure columns 1 and 3 of the 2nd tabular statement.
464	...	Ditto ,, . .	*For* "41·11" and "+1·08" *read* "41·09" and "+1·06", respectively, against Konkan in the figure columns 3 and 5 of the tabular statement.
512	2	August ,, . .	*For* "+·007" and "+·041" *read* "—·023" and "+·011", respectively, against Darjeeling in the figure columns 1 and 3 of the 2nd tabular statement.
667	2	October . ,, . .	*For* "—·024" *read* "+·024" against Dhubri in the 3rd figure column of the 1st tabular statement.

Corrigenda in India Monthly Weather Reviews for the year 1901—*contd.*

TABLES I AND II.

Page.	Part.	Table.	Meteorological Province or Station.	Heading.	Column number.*	Correction.
66, 134, 194, 258, 340, 418, 496 and 576.	January to August 1901	I	Darjeeling . . .	Pressure, 8 A.M., etc.	2	*For* "+·031", "+·087", "+·097", "+·044", "+·069", "—·015", "+·021", and "+·007" *read* "+·001", "+·057" "+·067", "+·014", "+·039", "—·045", "—·009" and "—·023", respectively.
67	January 1901 . .	I	Ranikhet . . .	Rainfall . .	6	*For* "+1·0" *read* "+1·09".
68	Ditto ,, . .	II	Karwar . . .	Temperature of air	1	*For* "6·2" *read* "86·2."
70, 138, 198, 262, 344, 422, 500 and 580.	January to August 1901	II	Darjeeling . . .	Pressure . .	5	*For* "+·027", "+·059", "+·082", "+·021", "+·054" "+·011", "+·019" and "—·005" *read* "—·007", "+·035", "+.058", "—·003", "+·030", "—·013", "—·005" and "—·029", respectively.
128	February 1901 . .	I	Dwarka . . .	Elevation of bar-cistern, etc.	...	*For* "27" *read* "37".
184	March ,, . .	I	Silchar . . .	Ditto . .	...	*For* "100" *read* "104".
262	April ,, . .	II	Chitaldroog . .	Temperature, wet-bulb.	1	*For* "76·8" *read* "66·8".
262	Ditto ,, . .	II	Katmandu . . .	Ditto . .	2 and 4	*For* "40·1" and "49·7" *read* "60·1" and "56·4", respectively.
332	May ,, . .	I	Motihari . . .	Pressure, 8 A.M., etc.	1 and 3	*For* "29·492" and "29·674" *read* "29·493" and "29·675", respectively.
332	Ditto ,, .	I	Motihari . . .	Temperature of air .	1, 4, 6 and 8	*For* "81·3", "73·4", "84·9" and "23·0" *read* "81·4", "73·8", "85·1" and "22·6", respectively.
333	Ditto ,, . .	I	Motihari . . .	Wind velocity .	1	*For* "6·2" *read* "6·31".
333	Ditto ,, . .	I	Motihari . . .	Hygrometry, 8 A.M.	2	*For* "1·025" *read* "1·029".
340	Ditto ,, . .	I	Mussooree . . .	Elevation of bar-cistern, etc.	...	*For* "6,709" *read* "6,705".
344	Ditto ,, . .	II	Bangalore . . .	Temperature, wet bulb.	4	*For* "66·9" *read* "68·9".
487	July ,, . .	I	III.—Assam . .	Rainfall . . .	6	*For* "—3·27" *read* "—3·28".
487	Ditto ,, . .	I	Silchar . . .	Ditto . . .	6	*For* "+0·80" *read* "+0·83".
488, 568 and 644	July to September 1901	I	Balasore . . .	Elevation of bar-cistern, etc.	...	*For* "46" *read* "48".
490, 570 and 646	Ditto ,, .	I	Bhavnagar Para . .	Ditto . .	...	*For* "35" *read* "55".
572 and 648.	August and September 1901.	I	Hanumkonda . .	Ditto . .	...	*For* "865" *read* "871".
642	September 1901 . .	I	Tezpur	Ditto . .	...	*For* "292" *read* "252".
642	Ditto ,, . .	I	Comilla . . .	Temperature of air .	14, 18 and 20	*For* "88·9," "82·6" and "12·6" *read* "89·0", "82·7" and "12·7", respectively.
651	Ditto ,, . .	I	Srinagar . . .	Rainfall .	46, 48, 49 and 51	*For* "1·80", "—1·06", "7·07" and "—14·96" *read* "1·82", "—1·04", "7·09" and "—14·94", respectively.
654	Ditto ,, . .	II	Karwar . . .	Temperature of air .	10, 12, 13 and 15	*For* "83·5", "8·7", "87·1" and "16·6" *read* "83·4", "8·6", "85·1" and "14·6", respectively.
656 and 726.	September and October 1901.	II	Darjeeling . .	Pressure . .	8	*For* "+·032" and "+·003" *read* "+·008" and "—·021", respectively.
713	October 1901 . .	I	I.—Burma Coast and Bay Islands.	Rainfall . .	46 and 48	*For* "14·20" and "+4·63" *read* "14·03" and "+4·46", respectively.
713	Ditto ,, . .	I	Akyab	Ditto . . .	46, 48, 49 and 51.	*For* "17·31," "+6·87," "17·31" and "+6·87" *read* "15·78", "+5·34", "15·78" and "+5·34", respectively.
725	Ditto ,, . .	II	Nagpur . . .	Cloud . . .	37	*For* "—4" *read* "—0·4".
726	Ditto ,, . .	II	Srinagar . . .	Temperature of air .	10	*For* "78·3" *read* "73·3".
726	Ditto ,, . .	II	Zanzibar . . .	Elevation of bar-cistern, etc.	3	*Omit* "15".
726	Ditto ,, . .	II	Port Victoria (Scychelles)	Ditto . .	3	*For* "181" *read* "15".
726	Ditto ,, . .	II	Mauritius(Pamplemouses)	Ditto . .	3	*Insert* "181".

* *N.B.*—From September 1901, columns in Tables I and II have been numbered, which have been quoted here for reference; previous to September 1901 column numbers are given for each kind of heading in the tables.

Corrigenda in India Monthly Weather Reviews for the year 1901—*concld.*

TABLES I AND II—*concluded.*

Page.	Part.	Table.	Meteorological Province or Station.	Heading.	Column number. *	Correction.
787	November 1901 . .	I	Rangpur . . .	Wind velocity .	36 and 37	*For* "1·9", and "2·0" *read* "2·3" and "2·5", respectively.
799	Ditto ,, . .	II	Madras . . .	Vapour tension .	28	*For* "—·046" *read* "+·046".
845	December ,, . .	I	Rangpur . . .	Wind velocity .	36 and 37	*For* "0" *read* "1·3".
851	Ditto ,, . .	I	Leh	Rainfall . .	46, 48, 49 and 51.	*For* "0·08", "—0·11", "0·08" and "—0·11" *read* "0·09", "—0·10", "0·09" and "—0·10", respectively.
853	Ditto ,, . .	I	Teheran . . .	Ditto . .	47 and 48	*Insert* "1·37" and "—0·96", respectively.
853	Ditto ,, . .	I	Ispahan . . .	Ditto . .	47 and 48	*Insert* "0·54" and "—0·01", respectively.
853	Ditto ,, . .	I	Aden	Ditto . .	46, 48, 49 and 51.	*For* "0·33", "—0·04", "0·33" and "—0·04" *read* "0·35", "—0·02", "0·35" and "—0·02", respectively.
856	Ditto ,, . .	II	Leh	Temperature of air.	10, 12, 13, 15, 17, 18 and 19.	*For* "36·1", "23·6", "46·1", "38·1", "32·3", "23·6" and "0" *read* "35·2", "22·7", "43·1", "35·1", "32·0", "23·3" and "—0·3", respectively.
857	Ditto ,, . .	II	Leh	Vapour tension .	26, 27 and 28.	*For* "·040", "·044" and "—·036" *read* "·042", "·045" and "—·035", respectively.
857	Ditto ,, . .	II	Leh	Humidity . .	31	*For* "20" *read* "22".
857	Ditto ,, . .	II	Minicoy . . .	Wind direction .	40, 41 and 47.	*For* "22", "12" and "N59°E" *read* "23", "13" and "N 60°E", respectively.
857	Ditto ,, . .	II	Minicoy . . .	Wind steadiness .	49	*For* "63" *read* "64".
857	Ditto ,, . .	II	Minicoy . . .	Wind velocity .	51	*For* "100†*" *read* "100*".

N.B.—From September 1901, columns in Tables I and II have been numbered, which have been quoted here for reference; previous to September 1901 column numbers are given for each kind of heading in the tables.

EXPLANATION OF PLATES.

PLATE I.—A chart of India showing the 11 meteorological provinces and 57 districts of India.

PLATE II.—A chart of India showing the normal average rainfall and the variation of the rainfall from the normal of the months of January and February 1901. This chart and the three following charts have been prepared to illustrate the data given in Table XXVIII. These charts are drawn up in the same manner as the rainfall chart (Plate V) in the Monthly Weather Reviews of the year 1901.

PLATE III.—A chart of India showing the normal average rainfall and the variation of the rainfall from the normal of the months of March to May 1901.

PLATE IV.—A chart of India showing the normal average rainfall and the variation of the rainfall from the normal of the months of June to October 1901.

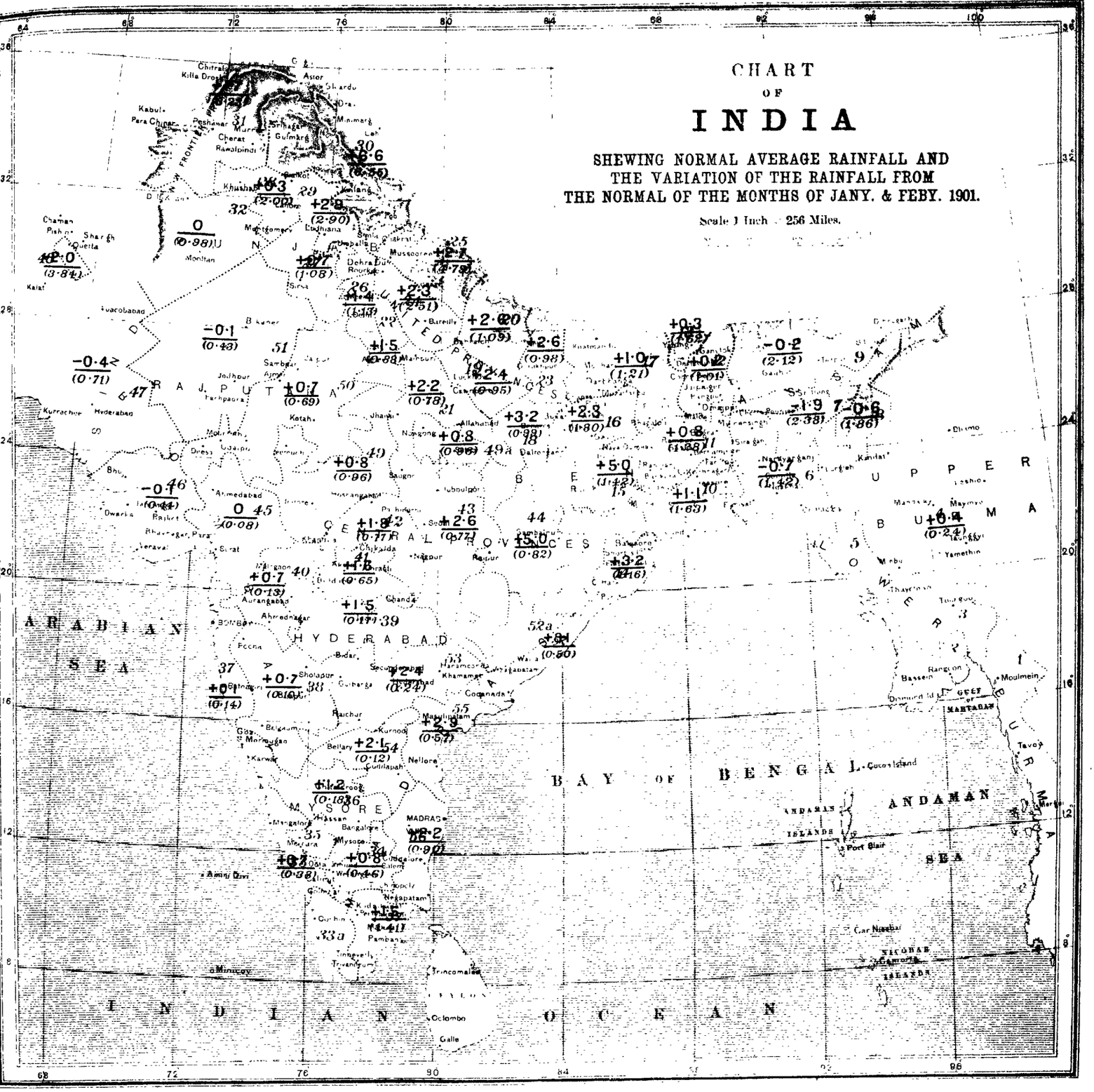
PLATE V.—A chart of India showing the normal average rainfall and the variation of the rainfall from the normal of the months of November and December 1901.

PLATE VI.—Chart showing the tracks of the more important cyclonic storms of 1001 in the Indian area during the south-west monsoon, a brief summary of which is given on pages 898 and 899.

Explanation.

The name of the districts can be at once ascertained by referring in the following list to the number given near the right hand boundary of each district in small slanting red figures.

1. Tenasserim
2. Lower Burma Deltaic
3. Central do.
4. Upper do.
5. Arakan
6. East Bengal
7. Assam, Surma
8. Do., Hills
9. Do., Brahmaputra
10. Deltaic Bengal
11. Central do.
12. North do.
13. Bengal Hills
14. Orissa
15. Chota Nagpur
16. South Bihar
17. North Bihar
18. United Provinces, East
19. South Oudh
20. North do.
21. United Provinces, Central
22. Do. do., West
23. Do. do., East Submontane
24. Do. do., West do.
25. Do. do., Hills
26. South East Punjab
27. South do.
28. Central do.
29. Punjab, Submontane
30. Do., and North-West Frontier Province, Hills
31. North Punjab
32. West Punjab
33. Malabar
33a Travancore
34. Madras, South Central
35. Coorg
36. Mysore
37. Konkan
38. Bombay Deccan
39. Hyderabad, North
40. Khandesh
41. Berar
42. Central Provinces, West
43. Do., Central
44. Do., East
45. Gujarat
46. Kathiawar & Cutch
47. Sind
48. Baluchistan Hills
49. Central India, East
49a Do. do.
50. Rajputana East, Central India West
51. West Rajputana
52. Madras, East Coast, North
52(a). Do. do. do. (a)
53. Hyderabad, South
54. Madras, Central
55. Madras, East Coast, Central
56. Do. East Coast, South
57. Madras, South



Explanation.

The Chart gives the variations of the rainfall of the month (to tenths of an inch) from the normal over the whole of India and Burma with the exception of Upper Burma, for which rainfall data have not been obtained for a sufficient number of years to furnish reliable and useful means. The country is divided into 57 areas, over each of which the meteorological conditions are fairly uniform, and the staple crops similar in character; and the means (both actual and normal for the month) have been calculated, and the numbers given in the centre of each division (usually with a + or − sign attached) give the difference between the actual and normal mean rainfall of the district of the month. A plus sign indicates that the rainfall was in excess, and a negative sign that it was in defect by the amounts indicated by the numbers to which the signs are attached. The normal average rainfall is also given below in smaller figures enclosed within brackets so that the percentage variation can be at once estimated. The name of the district can be at once ascertained by referring in the following list to the number given near the right hand boundary of each district in small slanting red figures.

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10. Deltaic Bengal
11. Central do.
12. North do.
13. Bengal Hills
14. Orissa
15. Chota Nagpur
16. South Bihar
17. North Bihar
18. United Provinces, East
19. South Oudh
20. North do.
21. United Provinces, Central
22. Do. do., West
23. Do. do., East Submontane
24. Do. do., West do.
25. Do. do., Hills
26. South East Punjab
27. South do.
28. Central do.
29. Punjab, Submontane
30. Do., and North-West Frontier Province, Hills
31. North Punjab
32. West Punjab
33. Malabar
33a Travancore
34. Madras, South Central
35. Coorg
36. Mysore
37. Konkan
38. Bombay Deccan
39. Hyderabad, North
40. Khandesh
41. Berar
42. Central Provinces, West
43. Do., Central
44. Do., East
45. Gujarat
46. Kathiawar & Cutch
47. Sind
48. Baluchistan Hills
49. Central India, East
49a Do. do.
50. Rajputana East, Central India West
51. West Rajputana
52. Madras, East Coast, North
52(a). Do. do. do. (a)
53. Hyderabad, South
54. Madras, Central
55. Madras, East Coast, Central
56. Do. East Coast, South
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44. Do., East
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Explanation.

The Chart gives the variations of the rainfall of the month (to tenths of an inch) from the normal over the whole of India and Burma with the exception of Upper Burma, for which rainfall data have not been obtained for a sufficient number of years to furnish reliable and useful means. The country is divided into 57 areas, over each of which the meteorological conditions are fairly uniform, and the staple crops similar in character: and the means (both actual and normal for the month) have been calculated, and the numbers given in the centre of each division (usually with a + or − sign attached) give the difference between the actual and normal mean rainfall of the district of the month. A plus sign indicates that the rainfall was in excess, and a negative sign that it was in defect by the amounts indicated by the numbers to which the signs are attached. The normal average rainfall is also given below in smaller figures enclosed within brackets so that the percentage variation can be at once estimated. The name of the district can be at once ascertained by referring in the following list to the number given near the right hand boundary of each district in small slanting red figures.

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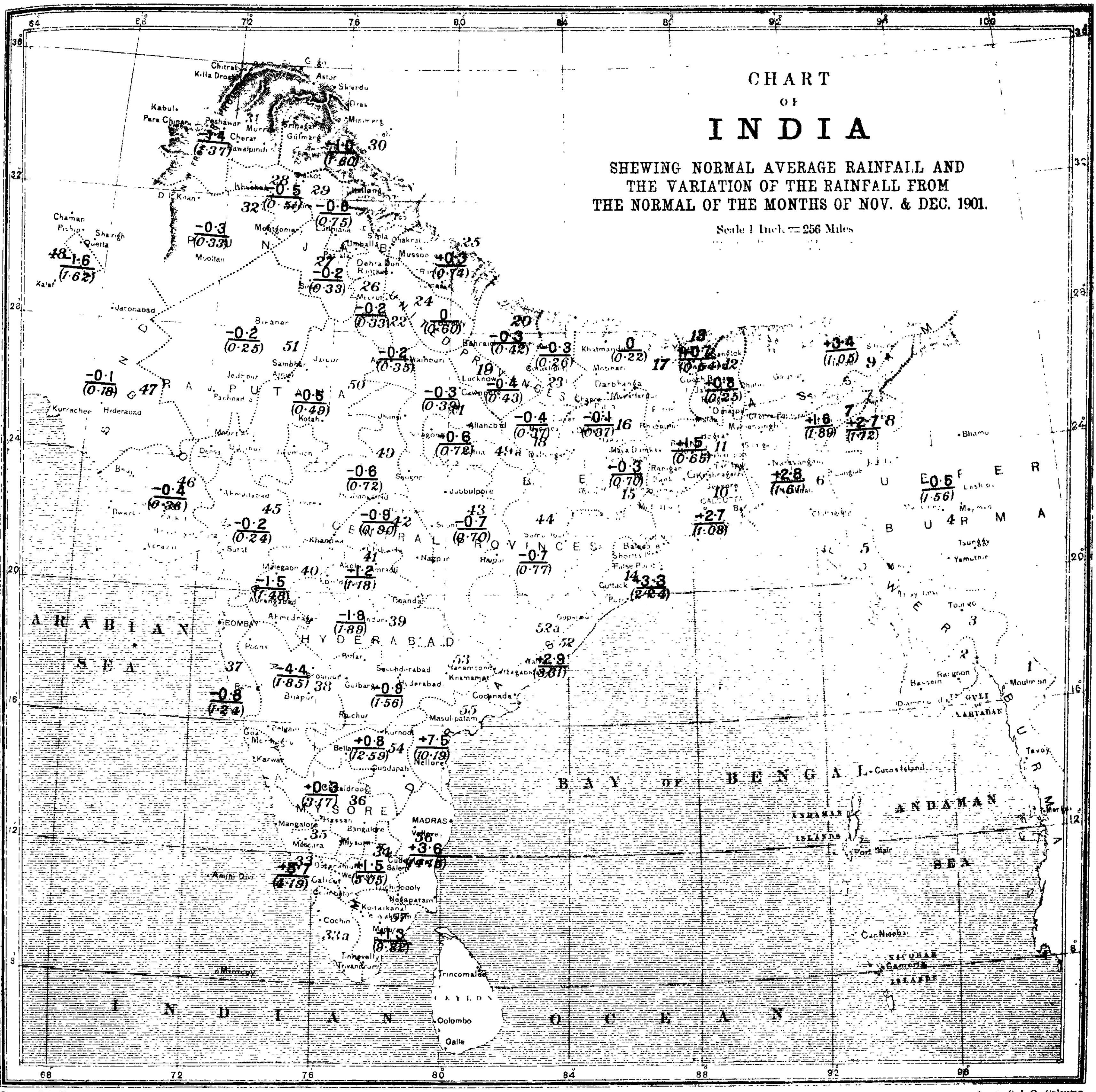
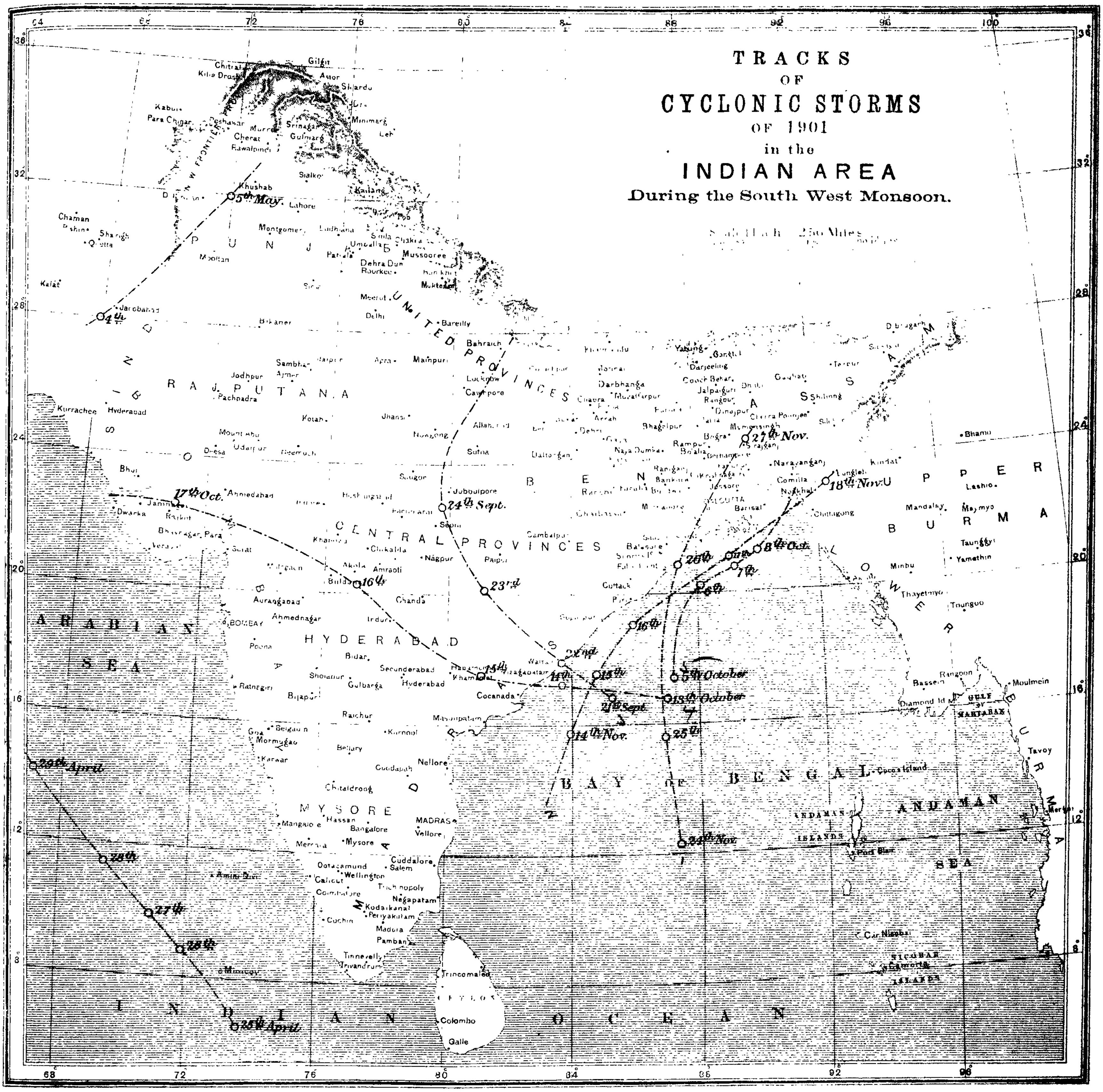
12. North do.
13. Bengal Hills
14. Orissa
15. Chota Nagpur
16. South Bihar
17. North Bihar
18. United Provinces, East
19. South Oudh
20. North do.
21. United Provinces, Central
22. Do. do., West
23. Do. do., East Submontane
24. Do. do., West do.
25. Do. do., Hills
26. South East Punjab
27. South do.
28. Central do.
29. Punjab, Submontane
30. Do., and North-West Frontier Province, Hills
31. North Punjab
32. West Punjab
33. Malabar
33a Travancore
34. Madras, South Central
35. Coorg
36. Mysore
37. Konkan
38. Bombay Deccan
39. Hyderabad, North
40. Khandesh
41. Berar
42. Central Provinces, West
43. Do., Central
44. Do., East
45. Gujarat
46. Kathiawar & Cutch
47. Sind
48. Baluchistan Hills
49. Central India, East
49a Do. do.
50. Rajputana East, Central India West
51. West Rajputana
52. Madras, East Coast, North
52(a). Do. do. do. (a)
53. Hyderabad, South
54. Madras, Central
55. Madras, East Coast, Central
56. Do. East Coast, South
57. Madras, South



Explanation.

The Chart gives the variations of the rainfall of the month (to tenths of an inch) from the normal over the whole of India and Burma with the exception of Upper Burma, for which rainfall data have not been obtained for a sufficient number of years to furnish reliable and useful means. The country is divided into 57 areas, over each of which the meteorological conditions are fairly uniform, and the staple crops similar in character; and the means (both actual and normal for the month) have been calculated, and the numbers given in the centre of each division (usually with a + or − sign attached) give the difference between the actual and normal mean rainfall of the district of the month. A plus sign indicates that the rainfall was in excess, and a negative sign that it was in defect by the amounts indicated by the numbers to which the signs are attached. The normal average rainfall is also given below in smaller figures enclosed within brackets so that the percentage variation can be at once estimated. The name of the district can be at once ascertained by referring in the following list to the number given near the right hand boundary of each district in small slanting red figures.

1. Tenasserim	17. North Bihar	32. West Punjab	47. Sind
2. Lower Burma Deltaic	18. United Provinces, East	33. Malabar	48. Baluchistan Hills
3. Central do.	19. South Oudh	33a Travancore	49. Central India, East
4. Upper do.	20. North do.	34. Madras, South Central	49a Do, do.
5. Arakan	21. United Provinces, Central	35. Coorg	50. Rajputana East, Central India West
6. East Bengal	22. Do. do., West	36. Mysore	51. West Rajputana
7. Assam, Surma	23. Do. do., East Submontane	37. Konkan	52. Madras, East Coast, North
8. Do., Hills	24. Do. do., West do.	38. Bombay Deccan	52(a). Do. do. do. (a)
9. Do., Brahmaputra	25. Do. do., Hills	39. Hyderabad, North	53. Hyderabad, South
10. Deltaic Bengal	26. South East Punjab	40. Khandesh	54. Madras, Central
11. Central do.	27. South do.	41. Berar	55. Madras, East Coast, Central
12. North do.	28. Central do.	42. Central Provinces, West	56. Do. East Coast, South
13. Bengal Hills	29. Punjab, Submontane	43. Do., Central	57. Madras, South
14. Orissa	30. Do., and North-West Frontier Province, Hills	44. Do., East	
15. Chota Nagpur	31. North Punjab	45. Gujarat	
16. South Bihar		46. Kathiawar & Cutch	



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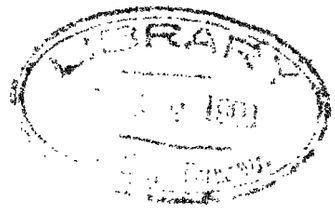

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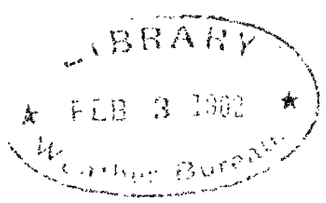

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